

Olerup SSP[®] DPB1

Product number: 101.311-24u/04u – without *Taq* pol.
Lot number: 29F
Expiry date: 2010-October-01
Number of tests: 24 tests – Product No. 101.311-24u
4 tests – Product No. 101.311-04u
Number of wells per test: 48
Storage - pre-aliquoted primers: dark at -20°C
- PCR Master Mix: -20°C
- Adhesive PCR seals RT
- Product Insert RT

This Product Description is only valid for Lot No. 29F.

CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP[®]* DPB1 LOT

The DPB1 specificity and interpretation tables have been updated for the DPB1 alleles described since the previous *Olerup SSP[®]* DPB1 lot was made (**Lot No. Y21**).

The primers of the wells detailed below have been added, exchanged or modified.

Well	5'-primer	3'-primer	rationale
4	-	Modified	Increased specificity of specific PCR product.
26	-	Modified	Increased specificity of specific PCR product.
47	Modified	-	Increased specificity of specific PCR product.
48	-	Modified	Increased specificity of specific PCR product.

PRODUCT DESCRIPTION

DPB1 SSP typing

CONTENT

The primer set contains 5'- and 3'-primers for identifying the DPB1*0101 to DPB1*9901 alleles.

PLATE LAYOUT

Each test consists of 48 PCR reactions in a 48 well cut PCR plate.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48

The 48 well cut PCR plate is marked with 'DPB1' in silver/gray ink.

Well No. 1 is marked with the Lot No. '29F'.

The PCR plates are heat-sealed with a PCR-compatible foil.

Please note: When removing each 48 well PCR plate, make sure that the remaining plates stay sealed. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

INTERPRETATION

Only DPB1 alleles will be amplified by the DPB1 typing kit. Thus, the interpretation of DPB1 typings is not influenced by the DPB2 gene or other HLA class II genes.

UNIQUELY IDENTIFIED ALLELES

All the phenotypically different DPB1 alleles, i.e. **DPB1*0101 to DPB1*9901**, recognized by the HLA Nomenclature Committee in July 2008¹ will give rise to unique amplification patterns by the primers in the DPB1 typing kit.

The DPB1 typing kit cannot distinguish the DPB1*010101 and DP1*010103 alleles, the DPB1*020102 to DPB1*020106 alleles, the DPB1*030101 and the DPB1*030102 alleles, the DPB1*040101 and DPB1*040102 alleles, the DPB1*110101 and DPB1*110102 alleles, the DPB1*200101 and DPB1*200102 alleles, the DPB1*260101 and DPB1*260102 alleles or the DPB1*410101 and DPB1*410102 alleles.

¹DPB1 alleles listed on the IMGT/HLA web page 2008-July-11, release 2.22.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

The 116 DPB1 alleles can be combined in 6 786 homozygous and heterozygous combinations. 682 of these genotypes do not give rise to unique amplification patterns. (The different lengths of the specific PCR products in lanes 24, 25, 32, 37, 40, 41, 42, 43, 44, 45, 47 and 48 were not considered in these calculations.)

101.311-24u/04u – without *Taq* polymerase

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Lot-specific Information

+++++++	+---+--	-----++	+-----+	-----	---+-----	0101,3801 = 2102,3801
+++++++	-----+	+++++--+	-----+	-----	-----	0301,6501 = 6501,9201
+++++++	-----+	+---+---+	---+---+	-----	-----	2601,6801 = 6501,7901
+++++++	-----	+---+---+	---+---+	-----	-----	2601,6501 = 2601,8401
+++++++	-----	-----+	-----+	-----	---+-----	2102,6501 = 2102,8401
+++++++	-----	-----+	-----+	-----	-----	0101,6501 = 0101,8401 = 6501,9001
+++++++	+--+-----	+++-----	-++-----	-----	---+-----	0101,6401N = 0601,2102 = 2102,6401N
+++++++	-----+	+++++--	-----++	-+-----	---+-----	1401,2102 = 2102,7601
+++++++	-----+	+++++--	-----++	-+-----	-----	0101,1401 = 0101,7601
+++++++	-----+	+++++--	-----+	-----	---+-----	0101,1402 = 0301,2102 = 1402,2102 = 2102,9201
+++++++	-----+	+++++--	-----+	-----	-----	0101,0301 = 0101,9201
+++++++	-----	+---+-----	---+---+	+-----+	-----	0101,0902 = 0902,9001
+++++++	-----	+---+-----	---+---+	+-----	---+-----	1301,2102 = 1302,2102
+++++++	-----	+---+-----	---+---+	+-----	-----	0101,1301 = 0101,1302 = 1301,9001
+++++++	-----	+---+-----	---+---+	-----	-----	0101,2601 = 2601,9001
+++++++	-----	-----	-----+	-----	---+-----	0101,2102 = 2102,2102 = 2102,8901 = 2102,9001
+++++++	-----	-----	-----+	-----	-----	0101,0101 = 0101,8901 = 0101,9001
+++++--+	-----+	+++++--	-----++	-+-----	-----	1401,9001 = 7601,9001
+++++--+	-----+	+++++--	-----+	-----	-----	0301,9001 = 9001,9201
+++++--+	-----	-----	-----+	-----	-----	8901,9001 = 9001,9001
+++++--+	-----+	+++++--	---+---+	-+-----	-----	1401,2601 = 2601,7601
+++++--+	-----+	+++++--	---+---+	-----	-----	0301,2601 = 2601,9201
+++++--+	-----	+---+-----	---+---+	+-----+	-----	0902,2601 = 0902,2701 = 0902,8901
+++++--+	-----	+---+-----	---+---+	+-----	-----	1301,2601 = 1301,2701 = 1301,8901 = 1302,2601
+++++--+	-----	+---+-----	---+---+	-----	-----	2601,2601 = 2601,2701 = 2601,8901
+++++--+	-----+	+++++--	-----++	-+-----	-----	1401,5601 = 5601,7601
+++++--+	-----+	+++++--	-----++	-----	-----	1101,9201 = 5601,7801
+++++--+	-----+	+++++--	-----+	-----	-----	0301,5601 = 5601,9201 = 8901,9201
+++++--+	-----	+---+-----	-----+	-----	-----	5601,5601 = 5601,8901
+++++--+	-----	+---+-----	---+---+	+-----	-----	1302,2701 = 1302,8901
+++++--	---+-----	++-++-	-+-+---+	-----	-----	2701,8801 = 8801,8901
+++++--	---+-----	+---+-----	---+---+	-----	-----	2701,3701 = 3701,8901
+++++--	-----+	+++++--	---+---+	-----	-----+	0301,8501 = 2701,6101N = 6101N,8501
+++++--	-----+	+---+-----	---+---+	-----	-----	2701,7901 = 7901,8901
+++++--	-----+	+++++--	-----++	-----	-----	0301,1101 = 1101,7801
++-++-++	-----+	+++++--+	-----+	-----	-----	6801,9201 = 8401,9201
++-+---++	+---+-----	+++++--	-----	-----	+-----	7701,9201 = 9201,9401
++-+---+	+-----+	+++++--	---+-----	-----	-----	2001,9201 = 6901,9201
++-+---+	-----+	+++++--	-----+	-+-----	-----	0301,7601 = 1401,9201 = 7601,9201
++-+---+	-----+	+++++--	-----	-----	-----	0301,9201 = 9201,9201
++-+---+	++-+---+	+++++--+	-----+	-----	---+-----	0301,1901 = 0502,1901
++-+---+	+---+-----	-----	-----	-----	+-----	5001,7701 = 5001,9401
++-+---+	-----+	+++++--+	-----++	-----	-----	6801,7801 = 7801,8401
++-+---+	-----+	+++++--+	-----+	-----	---+-----	0502,6801 = 0502,8401
++-+---+	-----+	+++++--+	-----+	-----	---+-----	1402,6801 = 1402,8401
++-+---+	-----+	+++++--+	-----+	-----	-----+	6101N,6801 = 6101N,8401
++-+---+	-----+	+++++--+	-----+	-----	-----	0301,6801 = 0301,8401

101.311-24u/04u – without *Taq* polymerase

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Lot-specific Information

++-+--+	-----+	+--+--+	-----+	-----	-----	2501,6801 = 2501,8401
++-+--+	-----+	+--+--+	-----+	-----	-----	6801,7901 = 7901,8401
++-+--+	-----+	-----+	-----+	-----	-----	5001,6801 = 5001,8401
++-+---	+-----+	+++-----	---+-----	-----	-----	2001,5001 = 5001,6901
++-----+	+-----+	+++++---	-----+	-----	+-----	7701,7801 = 7801,9401
++-----+	+-----+	+++++---	-----	-----	+-----	0502,7701 = 0502,9401
++-----+	+-----+	+++++---	-----	-----	+-----	1402,7701 = 1402,9401
++-----+	+-----+	+++++---	-----	-----	+-----+	6101N,7701 = 6101N,9401
++-----+	+-----+	+++++---	-----	-----	+-----	0301,7701 = 0301,9401
++-----+	+-----+	+--+-----	-----+	-----	+-----	2501,7701 = 2501,9401
++-----+	+-----+	+--+-----	---+-----	-----	+-----	7701,7901 = 7901,9401
++-----+	+-----+	+++++--+	+-----+	-----	---+-----	0501,1402 = 0502,3801
++-----+	+-----+	+++++--+	+-----+	-----	---+-----	0301,0501 = 0501,0502
++-----+	+-----+	+++++--+	+-----+	-----	---+-----	0301,3801 = 1402,3801
++-----+	+-----+	+--+-----	-----+	-----	-----	1502,2501 = 1902,5201
++-----+	+-----+	+++++--+	-----	---+-----	---+-----	0301,6201 = 0502,6201
++-----	+-----+	+++++---	---+-----	-----	---+-----	0301,6401N = 0601,1402 = 1402,6401N
++-----	+-----+	+++++---	---+-----	-----	-----	0301,0601 = 2001,2901
++-----	+-----	+--+-----	---+-----	-----	-----	3701,8701 = 5201,9301
++-----	+-----	+--+-----	+--+-----	-----	-----	1702,5501 = 1702,5801
++-----	+-----	+--+-----	+--+-----	-----	-----	1702,2101 = 1702,3601
++-----	+-----+	+++++--+	-----	---+-----	+-----	0301,3401 = 0502,3401
++-----	+-----+	+++++---	---+-----	-----	-----	2001,7801 = 6901,7801
++-----	+-----+	+++++---	---+-----	-----	---+-----	0502,2001 = 0502,6901
++-----	+-----+	+++++---	---+-----	-----	---+-----	1402,2001 = 1402,6901
++-----	+-----+	+++++---	---+-----	-----	-----+	2001,6101N = 6101N,6901
++-----	+-----+	+++++---	---+-----	-----	-----	0301,2001 = 0301,6901
++-----	+-----+	+++++---	---+-----	-----	-----	2001,7901 = 6901,7901
++-----	+-----+	+++++---	---+-----	-----	-----	2001,2501 = 2501,6901
++-----	+-----	+--+-----	---+-----	-----	-----	3001,5201 = 5201,5501
++-----	---+-----	+++++---	+--+-----	-----	-----	2501,8801 = 2901,7901
++-----	-----+	+++++--+	+-----+	-----	-----	0301,1702 = 1702,7001
++-----	-----+	+++++---	-----+	-----	-----	0301,7801 = 7801,7801
++-----	-----+	+++++---	-----	-----	---+-----	0301,0502 = 0502,0502
++-----	-----+	+++++---	-----	-----	---+-----	0301,1402 = 1402,1402
++-----	-----+	+++++---	-----	-----	-----+	0301,6101N = 6101N,6101N
++-----	-----+	+--+-----	-----+	---+-----	-----	2501,6701 = 4501,5201
+-----+	-----	+--+-----	---+-----	+-----	-----	1301,6501 = 1302,6501
+-----+	-----	+--+-----	---+-----	+-----+	-----	0902,5401 = 1301,5401
+-----+	-----	+--+-----	---+-----	+-----+	-----	0902,0902 = 0902,1301 = 0902,1302
+--+-----	-----	+--+-----	---+-----	+-----	-----	1301,1301 = 1301,1302
+-----	+-----	+++++---	+++-----	-----	-----+	0601,4401 = 4401,6901
+-----	+-----	+++++---	+++-----	-----	-----+	4401,5501 = 4401,5801
+-----	+-----	+++++---	+++-----	-----	-----	0601,8801 = 6901,8801
+-----	+-----	+++++---	+++-----	-----	-----	0601,2901 = 2901,6901
+-----	---+-----	+++++---	+++-----	-----	-----+	2901,4401 = 4401,4401
++++-----	+-----	+++-----	+++++---	-----	-----	1701,2701 = 1701,8901
++++-----	+-----	+-----	---+-----	-----	-----	2701,9301 = 8901,9301
++++-----	+-----	+-----+	+--+-----	-----	-----	2701,3601 = 3601,8901
++++-----	+-----	+-----	+--+-----	-----	-----	2101,2701 = 2101,8901
++++-----	+-----	+++-----	---+-----	-----	-----	2701,9801 = 8901,9801
++++-----	+-----	+-----	+--+-----	-----	-----	2701,5801 = 5801,8901
++++-----	+-----	+-----	---+-----	-----	-----	2701,5501 = 5501,8901
++++-----	+-----	+-----	---+-----	-----	-----	2701,3001 = 3001,8901
++++-----	---+-----	+++-----	+--+-----	-----	-----	0901,2701 = 0901,8901
++++-----	---+-----	+--+-----	---+-----	-----	-----	1001,2701 = 1001,8901
++++-----	-----+	+++-----	---+-----	-----	-----	2701,3501 = 3501,8901

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Lot-specific Information

+++---	-----	+--+---	---++-+	-----+	-----	2701,5401 = 5401,8901
+++---	-----	+-----	---+--+	-----	-----+	2701,8501 = 8501,8501 =
						8501,8901
+++---	-----	+-----	---+--+	-----	-----	2701,2701 = 2701,8901
+--+--+	+-----+	+++-----	-+-----	-----	-----	2001,6801 = 2001,8401
+--+--+	+-----+	-----+	-----+	---+	-----	1801,6801 = 1801,8401
+-----+	+--+---	+++-----	-+-----	-----	+-----	2001,7701 = 2001,9401
+-----+	+--+---	-----	-----	---+	+-----	1801,7701 = 1801,9401
+-----	+--++-	+-----+	+--++-	-----+	-----	3601,5501 = 3601,5801
+-----	+--++-	+-----+	+--++-	-----	-----	2101,3601 = 3601,3601
+-----	+-----+	+++-----	-+-----	---+	-----	1801,2001 = 1801,6901
+-----	+-----+	+++-----	-+-----	-----	-----	2001,2001 = 2001,6901
+-----	+-----	+--+-----	---++-+	-----+	-----	3001,8701 = 5501,8701
+++++++	+--+---	-----+	-----+	-----	-----+	6001,6501 = 6501,8301
+++++++	-----+	+++++--+	-----+	-+-----	-----	1401,6501 = 6501,7601
+++++++	-----	-----+	-----+	-----	-----	6501,6501 = 6501,8401
---+--+	+++++--+	-----+	-----	-----	-----+	0201,9901 = 0401,4801
---+--+	+++++---	-----+	-----	-----	-----++	1802,9601 = 3901,4101 =
						4101,9601
---+--+	+++++---	-----+	-----	-----	-----++	0201,3901 = 0401,1802
---+--+	+++++---	-----+	-----	-----	-----+	0202,0401 = 0202,9901
---+--+	+--+---	-----+	-----	-----	-----+	6001,9901 = 8301,9901
---+--+	+--+---	-----+	-+-----	-----+	-----+	1002,3901 = 7201,8001
---+--+	+--+---	-----+	-----	-----+	-----+	0401,5901 = 0602,7201
---+--+	+--+---	-----+	-----	-----	-----++	3901,6001 = 3901,8301 =
						6001,9601 = 8301,9601
---+--+	+--+---	-----+	-----	-----	-----++	0401,6001 = 0401,8301
---+--+	+--+---	-----+	-----+	-----+	+-----	0302,7701 = 3101,7701
---+--+	+--+---	-----	-----	---++	-----+	4001,6001 = 4001,8301
---+--+	+--+---	-----+	-----+	-----+	+-----	0302,9401 = 3101,9401
---+--+	-----+	-----+	-----	---++	-----+	3901,5301 = 4001,4901
---+--+	-----	-----+	-----	-----	-----++	3901,9601 = 9601,9601
---+---	+-----	-----++	-----+	---+--+	+--+---	0302,3401 = 3101,3401
---+---	-----	-----+	-----+	-----+	+-----	0302,3101 = 3101,3101
---+---	+++-----	-----+	-----	+-----	-----+	3301,6001 = 3301,8301
---+---	+++-----	-----+	-----	+-----+	-----	2301,3301 = 3301,7101
---++-++	-----+	+++++--+	-----++	-+-----	-----	6801,7601 = 7601,8401
---++-+	-+-----	-----+	-----+	-----	-----	5101,6801 = 5101,8401
---++-+	-+-----	-----	-----	---++	-----	2801,7501 = 5301,7301
---++-+	-----+	-----+	-----+	-----	-----+	4901,6801 = 4901,8401
---++-+	-----+	-----+	-----+	---++	-----	2801,6801 = 2801,8401
---++-+	-----+	-----+	-----+	---++	-----	5301,6801 = 5301,8401
---+--+	+--+---	+++++---	-----+	-+-----	+-----	7601,7701 = 7601,9401
---+--+	+-----+	+++++---	-+-----	-+-----	-----	6901,7601 = 7601,9101
---+--+	-----+	+++++---	-----+	-+-----	-----	1401,7601 = 7601,7601
---+--+	+++++---	-----+	-++	-----	-----+	4601,4901 = 4601,5101
---+--+	+++++---	-----+	-----	-----	-----+	1802,4901 = 1802,5101
---+--+	+--+---	-+-----	+++++---	-----	-----+	4901,8601 = 5101,8601
---+--+	+--++-	-----+	-----	-----	-----+	2401,6001 = 2401,8301
---+--+	+--+---	-----+	-+-----	-----+	-----+	1002,4901 = 1002,5101
---+--+	+--+---	-----+	-+-----	-----	-----+	4901,8001 = 5101,8001
---+--+	+--+---	-----+	-----	-----	+--+---	4901,7701 = 4901,9401
---+--+	+--+---	-----+	-----	-----	+-----	5101,7701 = 5101,9401
---+--+	+--+---	-----+	-----	-----	-----++	4901,6001 = 4901,8301
---+--+	+--+---	-----+	-----	-----	-----+	5101,6001 = 5101,8301
---+--+	+--+---	-----	-+-----	---++	-----+	1002,5301 = 2801,8001
---+--+	+--+---	-----	-----	---++	+-----	2801,7701 = 2801,9401
---+--+	+--+---	-----	-----	---++	-----	0402,2801 = 5301,5901
---+--+	+--+---	-----	-----	---++	+-----	5301,7701 = 5301,9401

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Lot-specific Information

---+---+ +--+---+ -----	-----	---++---	-----+--	5301,6001 = 5301,8301
---+---+ +---+---+ -----	-----+--	-----+--	-----	0801,5901 = 1601,7301
---+---+ +---+---+ -----	-----+--	-----	-+-----	0801,8201 = 3201,6801
---+---+ +---+---+ -----	-----+--	-----	-----+--	0801,6001 = 0801,8301 =
				4101,6801
---+---+ +---+---+ -----	-----+--	-----	-----+--	0201,6801 = 0602,0801
---+---+ +---+---+ -----	-----+--	-----	-----+--	0801,4601 = 4601,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	0801,2301 = 0801,7101
---+---+ +---+---+ -----	-----+--	-----	-+-----	0801,3201 = 3201,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	0801,1802 = 1802,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	0801,4101 = 4101,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	0201,0801 = 0201,8401
---+---+ +---+---+ -----	-----+--	-----	--+-----	1901,5901 = 1901,7301
---+---+ +---+---+ -----	-----+--	-----	-----+--	0802,5901 = 0802,7301
---+---+ +---+---+ -----	-----+--	-----	--+-----	1901,6001 = 1901,8301
---+---+ +---+---+ -----	-----+--	-----	-----++	0802,6001 = 0802,8301
---+---+ +---+---+ -----	-----+--	-----	-----+--	0602,0802 = 0802,7501
---+---+ +---+---+ -----	-----+--	-----	--+-----	1901,2301 = 1901,7101
---+---+ +---+---+ -----	-----+--	-----	-----+--	0802,2301 = 0802,7101
---+---+ +---+---+ -----	-----+--	-----	-----+--	0403,7501 = 6801,7101
---+---+ +---+---+ -----	-----+--	-----	--+-----	0801,1901 = 1601,1901
---+---+ +---+---+ -----	-----+--	-----	-----+--	0801,0802 = 0802,1601
---+---+ +---+---+ -----	-----+--	-----	-----	0801,4801 = 4801,8401
---+---+ +---+---+ -----	-----+--	-----	-----	0801,1601 = 1601,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	0202,0802 = 0202,8401 =
				0203,0802
---+---+ +---+---+ -----	-----+--	-----	--+-----	1901,1901 = 1901,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	0802,0802 = 0802,8401
---+---+ +---+---+ -----	-----+--	-----	+-----	5701,7701 = 5701,9401
---+---+ +---+---+ -----	-----+--	-----	-----+--	1002,6801 = 1002,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	6801,8001 = 8001,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	0402,6801 = 0402,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	5901,6801 = 5901,8401
---+---+ +---+---+ -----	-----+--	-----	+-----	6801,7701 = 6801,9401 =
				7701,8401
---+---+ +---+---+ -----	-----+--	-----	-+-----	6801,8201 = 8201,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	6001,6801 = 6001,8401 =
				6801,8301 = 8301,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	0602,6801 = 0602,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	1002,7501 = 7301,8001
---+---+ +---+---+ -----	-----+--	-----	+-----	7301,7701 = 7301,9401
---+---+ +---+---+ -----	-----+--	-----	+-----	7501,7701 = 7501,9401
---+---+ +---+---+ -----	-----+--	-----	-----+--	6001,7501 = 7501,8301
---+---+ +---+---+ -----	-----+--	-----	-----	1902,6801 = 1902,8401
---+---+ +---+---+ -----	-----+--	-----	-----	6801,9101 = 8401,9101
---+---+ +---+---+ -----	-----+--	-----	-----	6801,9801 = 8401,9801
---+---+ +---+---+ -----	-----+--	-----	+-----	0801,8101 = 8101,8401
---+---+ +---+---+ -----	-----+--	-----	-----	0801,0801 = 0801,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	6801,7301 = 7301,8401
---+---+ +---+---+ -----	-----+--	-----	-----	6801,7501 = 7501,8401
---+---+ +---+---+ -----	-----+--	-----	-----	6801,7001 = 7001,8401
---+---+ +---+---+ -----	-----+--	-----	+-----	1401,6801 = 1401,8401
---+---+ +---+---+ -----	-----+--	-----	-----	3501,6801 = 3501,8401
---+---+ +---+---+ -----	-----+--	-----	-+-----	4501,6801 = 4501,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	5701,6801 = 5701,8401
---+---+ +---+---+ -----	-----+--	-----	-----	6801,6801 = 6801,8401
---+---+ +---+---+ -----	-----+--	-----	-----+--	4801,6001 = 4801,8301
---+---+ +---+---+ -----	-----+--	-----	-----+--	2301,4801 = 4801,7101
---+---+ +---+---+ -----	-----+--	-----	-----+--	6001,8101 = 8101,8301

101.311-24u/04u – without *Taq* polymerase

Lot No.: 29F

Lot-specific Information

-----+	++++--+	-----+	-----+	-----	-----+	1601,6001 = 1601,8301
-----+	++++--+	-----	-++-----	-----+	-----+	1002,4601 = 4601,5901
-----+	++++--+	-----	-++-----	-----	-----++	4601,6001 = 4601,8301
-----+	++++--+	-----	-----	-----	-+---+	3201,6001 = 3201,8301 =
						4101,8201
-----+	++++--+	-----	-----	-----	-+-----	0201,8201 = 0602,3201
-----+	++++--+	-----	-----	-----	-----++	1802,6001 = 1802,8301
-----+	++++--+	-----	-----	-----	-----++	0201,6001 = 0201,8301 =
						0602,4101
-----+	++++--	+++-----	-++-----	-----	---++---	1802,6401N = 4601,6401N
-----+	++++--	+++-----	-++-----	-----	-----+	0601,1802 = 0601,4601 =
						4601,6901
-----+	++++--	++-----	-++++--	-----	-----+	1701,1802 = 1701,4601
-----+	++++--	-+-----	-++++--	-----	-----+	1802,8601 = 4601,8601
-----+	++++--	-----+	-----	+-----	-----	2301,8101 = 7101,8101
-----+	++++--	-----+	-----+	-----+	-----	1601,2301 = 1601,7101
-----+	++++--	-----	-++-----	-----+	-----+	2301,4601 = 4601,7101
-----+	++++--	-----	-++-----	-----	-----+	1802,4601 = 4601,4601
-----+	++++--	-----	-----	-----+	-+-----	2301,3201 = 3201,7101
-----+	++++--	-----	-----	-----+	-----+	1802,2301 = 1802,7101
-----+	++++--	-----	-----	-----+	-----+	2301,4101 = 4101,7101
-----+	++++--	-----	-----	-----+	-----+	0201,2301 = 0201,7101
-----+	+++-----	-----+	-----	-----	-----+	0203,6001 = 0203,8301
-----+	+++-----	-----	-----	-----	-----++	0202,6001 = 0202,8301
-----+	+++-----	-----+	-----	-----+	-----	0203,2301 = 0203,7101
-----+	+++-----	-----	-----	-----+	-----+	0202,2301 = 0202,7101
-----+	+++-----	-----+	+-----+	-----	-----+	2201,6001 = 2201,8301
-----+	+++-----	-----+	+-----+	-----	-----	2201,2301 = 2201,7101
-----+	+++-----	-----	-----	-----	-----+	4701,6001 = 4701,8301
-----+	+++-----	-----	-----	-----+	-----	2301,4701 = 4701,7101
-----+	+++-----	-----	-----	-----++	-----	2301,9501 = 7101,9501
-----+	+++-----	-----+	-----+	-----+	-----+	0403,6001 = 0403,8301
-----+	+++-----	-----	-----	-----+	-----+	6001,7101 = 7101,8301
-----+	+++-----	+-----	---++-	-----+	-----	3001,7101 = 5501,7101
-----+	+++-----	-----+	-----+	-----+	-----	0403,2301 = 0403,7101
-----+	+++-----	-----	-----	-----+	-----	2301,7101 = 7101,7101
-----+	++-----	-----++	+-----+	-----+	-----	0203,6301 = 1502,2201
-----+	++-----	+-----+	+-----+	-----+	-----	2201,5501 = 2201,5801
-----+	++-----	+-----+	---++-	-----+	-----	0403,3001 = 0403,5501
-----+	+-----	-----+	-----	-----	-----+	0102,6001 = 0102,8301
-----+	+-----	-----++	+-----+	-----	-+-----	6001,9701 = 8301,9701
-----+	+-----	-----++	+-----+	-----	---+-----	0501,6001 = 0501,8301
-----+	+-----	-----++	+-----+	-----	---+-----	3801,6001 = 3801,8301
-----+	+-----	-----+	-----	-----+	-----+	1502,6001 = 1502,8301
-----+	+-----	-----	-----	-----	+-----	1902,7701 = 1902,9401
-----+	+-----	-----	-----	-----	-----+	1902,6001 = 1902,8301
-----+	+-----	+++++	+-----	-----	+-----	7001,7701 = 7001,9401
-----+	+-----	+++++	-----+	+-----	+-----	1401,7701 = 1401,9401
-----+	+-----	+++-----	-+-----	+-----	+-----	7701,9101 = 9101,9401
-----+	+-----	+++-----	---+-----	-----	+-----	3501,7701 = 3501,9401
-----+	+-----	+++-----	---++-	-----	+-----	7701,9801 = 9401,9801
-----+	+-----	+-----	-----+	+-----	+-----	4501,7701 = 4501,9401
-----+	+-----	-----++	+-----+	-----+	-----+	6001,6301 = 6301,8301
-----+	+-----	-----	-----	---+-----	---+-----	6001,6201 = 6201,8301
-----+	+-----	-----	---+-----	-----+	+-----	1002,7701 = 1002,9401
-----+	+-----	-----	---+-----	-----+	-----+	1002,8001 = 5901,8001
-----+	+-----	-----	---+-----	-----	+-----	7701,8001 = 8001,9401
-----+	+-----	-----	---+-----	-----	-----++	6001,8001 = 8001,8301
-----+	+-----	-----	-----	---+-----	+-----	0402,7701 = 0402,9401

SPECIFICITY TABLE

DPB1 SSP typing

Specificities and sizes of the PCR products of the 48 primer mixes used for DPB1 SSP typing

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified DPB1 alleles
1³	245 bp	515 bp	010101-010103, 030101-030102, 0502, 0902, 1301, 1302, 1402, 1702, 2102, 2501, 260101-260102, 2901, 3701, 4401, 5001, 5201, 5601, 6101N, 7801, 7901, 8801, 9001, 9201
2³	220 bp	515 bp	010101-010103, 030101-030102, 0502, 1402, 1702, 1801, 200101-200102, 2102, 2501, 260101-260102, 2701, 3601, 5001, 5201, 5601, 6101N, 7801, 7901, 8501, 8701, 8901, 9001, 9201
3^{3,4,5}	100 bp	430 bp	010101-010103, 0302, 040101-040102, 0902, 110101-110102, 1301, 1302, 1501, 2002, 2102, 260101-260102, 2701, 3101, 3301, 3901, 4001, 5601, 6501, 6601, 7201, 7401, 8501, 8901, 9001, 9601, 9901
4^{3,4}	140 bp	430 bp	010101-010103, 0302, 040101-040102, 2102, 2401, 260101-260102, 2701, 2801, 3101, 3901, 4001, 4901, 5101, 5301, 5601, 6501, 6601, 7201, 7601, 8501, 8901, 9001, 9201, 9601, 9901
5	235 bp	515 bp	010101-010103, 0801, 0802, 1901, 2102, 5001, 5701, 6501, 6801, 7301, 7501, 8401, 9001
6	165 bp	430 bp	010101-010103, 0902, 1301, 2102, 260101-260102, 6501
7	160 bp	430 bp	010101-010103, 0902, 1301, 1302, 2102, 260101-260102, 5601, 6501, 7601, 9001, 9201
8	210 bp	515 bp	0102, 020102-020106, 0202, 0203, 040101-040102, 0402, 0403, 0501, 0602, 0801, 0802, 1502, 1601, 1802, 1901, 1902, 2201, 2301, 2401, 3201, 3301, 3801, 3901, 4001, 4601, 4701, 4801, 4901, 5101, 5301, 6001, 6201, 6301, 6501, 6801, 7101, 7501, 7701, 8001, 8101, 8201, 8401, 9401, 9601, 9701, 9901
9³	165 bp	430 bp	0102, 020102-020105, 020106 ^{weakly} , 0202, 0203, 0402, 0403, 0501, 0601, 0602, 0802, 1002, 1102, 1502, 1601, 1602, 1701, 1801,

			1802, 1901, 1902, 200101-200102, 2101, 2201, 2301, 3001, 3201, 3401, 3601, 3801, 410101-410102, 4601, 4701, 4801, 5501, 5801, 5901, 6001, 6201, 6301, 6401N, 6901, 7101, 7701, 8001, 8201, 8301, 8601, 8701, 9101, 9301, 9401, 9501, 9701, 9801
10	220 bp	515 bp	020102-020106, 0202, 0203, 0403, 0801, 0802, 1601, 1802, 1901, 2201, 3201, 3301, 410101-410102, 4601, 4701, 4801, 7101, 8101, 9501
11	190 bp	515 bp	020102-020106, 040101-040102, 0402, 0602, 1002, 1102, 1602, 1802, 2301, 2401, 3201, 3301, 410101-410102, 4601, 4701, 5101, 5901, 6001, 6601, 7101, 7201, 7301, 7501, 7701, 8001, 8101, 8201, 8301, 8601, 9401, 9901
12^{3,4}	80 bp	515 bp	020102, 020103 ^{weakly} , 020104-020106, 0601, 0801, 0901, 1001, 1102, 1601, 1602, 1701, 1802, 2901, 3201, 3701, 410101-410102, 4401, 4601, 4801, 6401N, 8101, 8601, 8801, 9301
13	180 bp	430 bp	0102, 0202, 0203, 0501, 0802, 1901, 2201, 2401, 3801, 4701, 9701
14⁴	105 bp	430 bp	0102, 0202, 0203, 0501, 1702, 2101, 2201, 3601, 3801, 9701
15	200 bp	430 bp	0102, 0202, 0203, 1502, 1902, 4801, 9501, 9901
16^{3,4}	80 bp	430 bp	030101-030102, 0402, 0502, 0602, 1002, 1401, 1402, 1801, 1902, 200101-200102, 2501, 2801, 3501, 4501, 4901, 5001, 5101, 5301, 5701, 5901, 6001, 6101N, 6801, 7001, 7301, 7501, 7601, 7701, 7801, 7901, 8001, 8201, 8301, 9101, 9201, 9801
17	260 bp	515 bp	030101-030102, 0502, 0601, 0901, 0902, 1001, 110101-110102, 1301, 1302, 1401, 1402, 1701, 1702, 200101-200102, 2101, 2501, 260101-260102, 2701, 2901, 3001, 3501, 3601, 3701, 4401, 4501, 5201, 5401, 5501, 5601, 5801, 6101N, 6401N, 6701, 6901, 7001, 7601, 7801, 7901, 8501, 8701, 8801, 9101, 9201, 9301, 9801
18	180 bp	430 bp	030101-030102, 0502, 0601, 0901, 1401, 1402, 1701, 200101-200102, 2901, 3501, 4401, 6101N, 6401N, 6901, 7001, 7601, 7801, 8601, 8801, 9101, 9201, 9801
19	200 bp	430 bp	030101-030102, 0502, 0601, 110101-110102, 1401, 1402, 1702, 200101-200102, 2501,

			2901, 4401, 4501, 5201, 5601, 6101N, 6401N, 6701, 6901, 7001, 7401, 7601, 7801, 8701, 9101, 9201
20	235 bp	515 bp	030101-030102, 0502, 0901, 0902, 1001, 1301, 1302, 1401, 1402, 1702, 2501, 260101-260102, 2901, 3501, 3701, 4401, 4501, 5201, 5401, 5601, 6101N, 6701, 7001, 7601, 7801, 7901, 8801, 9201
21^{3,4}	100 bp	430 bp	030101-030102, 0502, 0901, 1401, 1402, 2901, 3501, 4401, 5001, 5701, 6101N, 7001, 7601, 7801, 8801, 9201
22³	185 bp	430 bp	040101-040102, 2002, 2401, 3301, 3901, 4901, 5101, 6601, 7201, 8101, 9601, 9901
23⁴	145 bp	430 bp	0102, 0501, 1502, 1702, 1902, 3401, 3601, 3801, 6201, 6301, 9701
24⁶	195, 265 bp	515 bp	0203, 0302, 0403, 0501, 0801, 0802, 1601, 1901, 2201, 3101, 3801, 5701, 6301, 6501, 6801, 8401, 9701
25⁷	190, 265 bp	515 bp	0501, 1702, 2101, 2201, 3601, 3801, 4401, 5801, 6301, 7001, 9701
26⁴	75 bp	430 bp	0601, 0901, 1701, 2901, 4401, 4601, 6401N, 8601, 8801
27⁴	95 bp	430 bp	0601, 1002, 1701, 200101-200102, 4601, 6401N, 6901, 8001, 8601, 9101, 9801
28	200 bp	515 bp	0901, 0902, 1001, 1102, 1301, 1302, 1602, 1701, 2002, 2101, 260101-260102, 2701, 3001, 3501, 3601, 3701, 5401, 5501, 5801, 6601, 7901, 8501, 8601, 8801, 9301, 9801
29	220 bp	515 bp	0901, 1001, 1602, 1701, 3001, 5401, 5501, 5801, 8601
30	185 bp	430 bp	0901, 1401, 1701, 3501, 7601, 8601, 9101, 9801
31⁴	120 bp	430 bp	010101-010103, 0302, 0403, 0501, 0801, 0802, 0902, 1001, 110101-110102, 1301, 1302, 1601, 1702, 1901, 2101, 2102, 2201, 2501, 260101-260102, 2701, 3001, 3101, 3601, 3701, 3801, 4501, 5201, 5401, 5501, 5601, 5801, 6301, 6501, 6701, 6801, 7901, 8401, 8501, 8701, 8901, 9001, 9301, 9701
32^{4,8}	75, 195 bp	430 bp	110101-110102, 7801
33⁴	140 bp	430 bp	0902, 1301, 1302, 2002, 3301, 8101
34	210 bp	515 bp	1401, 4501, 6701, 7601, 9101
35	195 bp	430 bp	1501, 7401
36	260 bp	515 bp	1501, 1801, 2801, 3401, 4001, 5301, 6201

37⁹	185, 255 bp	515 bp	0102 [?] , 0203 [?] , 0302 [?] , 0402, 0403 [?] , 0601 [?] , 0801 [?] , 1001-1102 [?] , 1302 [?] , 1402 [?] , 1501, 1502- 1802 [?] , 1902-2701 [?] , 2801, 290101-3901 [?] , 4001, 410101-410102 [?] , 4401-5201 [?] , 5301, 5401- 7301 [?] , 7401, 7501-9901 [?]
38⁴	100 bp	515 bp	0403, 1502, 2301, 3401, 5201, 5501, 5801, 6201, 6301, 6701, 7101, 8701, 9501
39	210 bp	515 bp	0302, 1002, 2801, 3101, 3401, 5701, 5901, 7201, 7301, 9501
40^{4,10}	95, 180 bp	430 bp	0102 [?] , 0203 [?] , 0302 [?] , 0403 [?] , 0601 [?] , 0801 [?] , 0902, 1001-1102 [?] , 1302 [?] , 1402 [?] , 1502-1802 [?] , 1902-2901 [?] , 3001, 3101-410102 [?] , 4401-5301 [?] , 5401, 5501-9901 [?]
41^{4,11}	75, 230 bp	515 bp	3101, 3401, 7701, 9401
42^{4,12}	140, 185, 285 bp	430 bp	3201, 8201, 9701
43^{4,13}	65, 190 bp	430 bp	0102 [?] , 0203 [?] , 0302 [?] , 0403 [?] , 0501, 0502, 0601 [?] , 0801 [?] , 1001-1102 [?] , 1302 [?] , 1402 [?] , 1502- 1802 [?] , 1901, 1902-3301 [?] , 3401, 3501-410102 [?] , 4401-6101N [?] , 6201, 6301-9901 [?]
44¹⁴	195, 245, 275 bp	430 bp	1402, 2102, 3801, 6401N
45^{4,15}	120, 190, 245 bp	430 bp	1002, 1802, 2002, 3901, 4601, 4901, 8001, 8601, 9601
46	205 bp	515 bp	410101-410102, 6001, 8301, 9601
47¹⁶	165, 255 bp	515 bp	0102 [?] , 020102-020106, 0202, 0203 [?] , 0302 [?] , 040101-040102, 0403 [?] , 0601 [?] , 0602, 0801 [?] , 0802, 1001-1102 [?] , 1302 [?] , 1402 [?] , 1502-1802 [?] , 1902-410102 [?] , 4401, 4501-9901 [?]
48¹⁷	210, 280 bp	515 bp	6101N, 8501

¹Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of DPB1 SSP typings.

When the primers in a primer mix can give rise to specific PCR products of more than one length this is indicated if the size difference is 20 base pairs or more. Size differences shorter than 20 base pairs are not given. For high resolution SSP kits the respective length of the specific PCR product(s) of the alleles amplified by these primer mixes are given.

Nonspecific amplifications, i.e. a ladder or a smear of bands, may sometimes be seen. GC-rich primers have a higher tendency of giving rise to nonspecific amplifications than other primers.

PCR fragments longer than the control bands may sometimes be observed. Such bands should be disregarded and do not influence the interpretation of the SSP typings.

PCR fragments migrating faster than the control bands, but slower than a 400 bp fragment may be seen in some gel read-outs. Such bands can be disregarded and do not influence the interpretation of the SSP typings.

Some primers may give rise to primer oligomer artifacts. Sometimes this phenomenon is an inherent feature of the primer pair(s) of a primer mix. More often it is due to other factors such as too low amount of DNA in the PCR reactions, taking too long time in setting up the PCR reactions, working at elevated room temperature or using thermal cyclers that are not pre-heated.

²The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 430 base pairs, for most wells, or a band of 515 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the longer, 515 bp, internal positive control band in order to help in the correct orientation of the DPB1 typing.

In addition, wells number 2, 5, 8, 10, 11, 12, 17, 20, 24, 25, 28, 29, 34, 36, 37, 38, 39, 41, 46, 47 and 48 contain the primer pair giving rise to the longer, 515 bp, internal positive control band in order to allow kit identification.

In the presence of a specific amplification the intensity of the control band often decreases.

³Primer mixes 1, 2, 3, 4, 9, 12, 16, 21 and 22 may yield less specific PCR products than the other DPB1 primer mixes.

⁴Specific PCR fragments shorter than 150 base pairs are less intense and not as sharp as longer specific bands.

⁵Primer mix 3 may give rise to non-specific amplifications and primer dimer formation.

⁶Primer mix 24: Specific PCR fragment of 195 bp in the DPB1*0203 allele. Specific PCR fragment of 265 bp in the DPB1*0302, 0403, 0501, 0801, 0802, 1601, 1901, 2201, 3101, 3801, 5701, 6301, 6501, 6801, 8401 and 9701 alleles.

⁷Primer mix 25: Specific PCR fragment of 190 bp in the DPB1*0501, 1702, 2101, 2201, 3601, 3801, 4401, 5801, 6301 and 9701 alleles. Specific PCR fragment of 265 bp in the DPB1*7001 allele.

⁸Primer mix 32: Specific PCR fragment of 75 bp in the DPB1*7801 allele. Specific PCR fragment of 195 bp in the DBB1*110101-110102 alleles.

⁹Primer mix 37: Specific PCR fragment of 185 bp in the DPB1*1501, 2801, 5301, 4001 and 7401 alleles. Specific PCR fragment of 255 bp in the DPB1*0402 allele. The 3rd exon of many DPB1 alleles is not sequenced and thus the primer pair in primer mix 37 matching the DPB1*0402 sequence motif in the 3rd exon may amplify other DPB1 alleles.

¹⁰Primer mix 40: Specific PCR fragment of 95 bp in the DPB1*0902 allele. Specific PCR fragment of 180 bp in the DPB1*3001 and 5401 alleles. The 1st exon of most DPB1 alleles is not sequenced and thus the primer pair in primer mix 40 matching the DPB1*0902 sequence motif in the 1st exon may amplify other DPB1 alleles.

Primer mix 40 may give rise to nonspecific amplifications.

¹¹Primer mix 41: Specific PCR fragment of 75 bp in the DPB1*7701 allele. Specific PCR fragment of 230 bp in the DPB1*3101, 3401 and 9401 alleles.

¹²Primer mix 42: Specific PCR fragment of 140 bp in the DPB1*9701 allele. Specific PCR fragment of 185 bp in the DPB1*3201 allele. Specific PCR fragment of 285 bp in the DPB1*8201 allele.

¹³Primer mix 43: Specific PCR fragment of 65 bp in the DPB1*0501, 0502 and 1901 alleles. Specific PCR fragment of 190 bp in the DPB1*3401 and 6201 alleles. The 4th exon of most DPB1 alleles is not sequenced and thus the primer pair in primer mix 43 matching the DPB1*0501, 0502 and 1901 sequence motif in the 4th exon may amplify other DPB1 alleles.

¹⁴Primer mix 44: Specific PCR fragment of 195 bp in the DPB1*1402 and 2102 alleles. Specific PCR fragment of 245 bp in the DPB1*3801 allele. Specific PCR fragment of 275 bp in the DPB1*6401N allele.

¹⁵Primer mix 45: Specific PCR fragment of 120 bp in the DPB1*1002, 4601, 8001 and 8601 alleles. Specific PCR fragment of 190 bp in the DPB1*2002, 3901, 4901 and 9601 alleles. Specific PCR fragment of 245 bp in the DPB1*1802 allele.

¹⁶Primer mix 47: Specific PCR fragment of 165 bp in the DPB1*4401 allele. Specific PCR fragment of 255 bp in the DPB1*020102-0202, 040101-040102, 0602 and 0802 alleles.

The 3rd exon of many DPB1 alleles is not sequenced and thus the primer pair in primer mix 47 matching the DPB1*0201, 0202, 0401, 0602 and 0802 sequence motif in the 3rd exon may amplify other DPB1 alleles.

¹⁷Primer mix 48: Specific PCR fragment of 210 bp in the DPB1*6101N allele. Specific PCR fragment of 280 bp in the DPB1*8501 allele.

'?', nucleotide sequence information not available for the primer matching sequence.

INTERPRETATION TABLE																								
DPB1 SSP typing																								
Amplification patterns of the DPB1*0101 to DPB1*9901 alleles																								
	Well ⁶																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Length of spec.	245	220	100	140	235	165	160	210	165	220	190	80	180	105	200	80	260	180	200	235	100	185	145	195
PCR product																								265
Length of int.	515	515	430	430	515	430	430	515	430	515	515	515	430	430	430	430	515	430	430	515	430	430	430	515
pos. control ¹																								
5'-primer(s) ²	9	9	36	36	11	35	36	9	35	9	35	56	9	35	28	56	11	11	11	11	57	36	35	9
	5'-Tg T ³	5'-Tg T ³	5'-C gC ³	5'-C gC ³	5'-g gg ³	5'-g TA ³	5'-C gC ³	5'-T TT ³	5'-Ag C ³	5'-T TT ³	5'-g TT ³	5'-T gA ³	5'-T TT ³	5'-Ag C ³	5'-gA g ³	5'-T gA ³	5'-g TT ³	5'-g TT ³	5'-g TT ³	5'-g TT ³	5'-gAC ³	5'-C gC ³	5'-Ag C ³	5'-T TT ³
			36	36	11	35	36		36						35		11	11	11	11		36		
			5'-C gC ³	5'-C gC ³	5'-g gg ³	5'-g TA ³	5'-C gC ³		5'-C gT ³						5'-Ag C ³		5'-g TT ³	5'-g TT ³	5'-g TT ³	5'-g TT ³		5'-C gC ³		
3'-primer(s) ³	76	69	55	69	76	76	76	65	76	69	84	69	55	55	84	69	84	57	65	76	76	84	69	60
	5'-CA T ³	5'-CTT ³	5'-C Ag ³	5'-CTT ³	5'-CA T ³	5'-CA T ³	5'-CA T ³	5'-gAT ³	5'-TAT ³	5'-CTC ³	5'-C gC ³	5'-CTC ³	5'-gC C ³	5'-gC C ³	5'-C gC ³	5'-CTT ³	5'-C gT ³	5'-TA g ³	5'-gAg ³	5'-CA T ³	5'-CA T ³	5'-C gC ³	5'-CTT ³	5'-gTg ³
								65	76															84
								5'-g gT ³	5'-CAT ³															5'-C gT ³
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DPB1 allele ⁴																								
*010101-010103	1	2	3	4	5	6	7																	
*0102								8	9				13	14	15								23	
*020102, 020104-020105								8	9	10	11	12												
*020103								8	9	10	11	w												
*020106								8	w	10	11	12												
*0202								8	9	10			13	14	15									
*0203								8	9	10			13	14	15									24
*030101-030102	1	2														16	17	18	19	20	21			
*0302			3	4																				24
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

INTERPRETATION TABLE																											
DPB1 SSP typing																											
Amplification patterns of the DPB1*0101 to DPB1*9901 alleles																											
Well ⁶																											
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48				
190	75	95	200	220	185	120	75	140	210	195	260	185	100	210	95	75	140	65	195	120	205	165	210	Length of spec.			
265							195					255			180	230	185	190	245	190		255	280	PCR product			
																	285		275	245							
515	430	430	515	515	430	430	430	430	515	430	515	515	515	515	430	515	430	430	430	430	515	515	515	Length of int.			
																								pos. control ¹			
9	57	57	11	9	9	57	33	36	9	33	11	36	35	9	-22	in ⁵	9	35	7	17	9	35	11	5'-primer(s) ²			
5'-Tg g ^{3'}	5'-gAC ^{3'}	5'-gAC ^{3'}	5'-g TT ^{3'}	5'-Tg C ^{3'}	5'-Tg C ^{3'}	5'-gAg ^{3'}	5'-gg C ^{3'}	5'-C gC ^{3'}	5'-Tg C ^{3'}	5'-gg C ^{3'}	5'-g gg ^{3'}	5'-C gC ^{3'}	5'-Ag C ^{3'}	5'-T TT ^{3'}	5'-gCA ^{3'}	5'-CAT ^{3'}	5'-T TT ^{3'}	5'-Ag C ^{3'}	5'-TAA ^{3'}	5'-ACA ^{3'}	5'-T TT ^{3'}	5'-Ag C ^{3'}	5'-g TT ^{3'}				
35			11				33	36		33	11	36	36		9	9		##	17	35		##	11				
5'-Ag C ^{3'}			5'-g TT ^{3'}				5'-gg C ^{3'}	5'-C gC ^{3'}		5'-gg C ^{3'}	5'-g gg ^{3'}	5'-C gC ^{3'}	5'-C gT ^{3'}		5'-Tg C ^{3'}	5'-T TT ^{3'}		5'-AAG ^{3'}	5'-AC C ^{3'}	5'-g TA ^{3'}		5'-CC T ^{3'}	5'-g TT ^{3'}				
							73					##							32	57							
							5'-g CT ^{3'}					5'-CC T ^{3'}							5'-CC C ^{3'}	5'-gAC ^{3'}							
84	69	76	65	69	57	84	84	69	65	84	84	84	55	65	-4	12	43	84	84	84	64	76	67	3'-primer(s) ³			
5'-C gT ^{3'}	5'-CTC ^{3'}	5'-TAT ^{3'}	5'-gAT ^{3'}	5'-CTC ^{3'}	5'-TA g ^{3'}	5'-C gT ^{3'}	5'-C gT ^{3'}	5'-CTC ^{3'}	5'-gAg ^{3'}	5'-C gA ^{3'}	5'-C gA ^{3'}	5'-C gA ^{3'}	5'-C Ag ^{3'}	5'-gAg ^{3'}	5'-CAC ^{3'}	5'-g CA ^{3'}	5'-CCA ^{3'}	5'-C gA ^{3'}	5'-C gT ^{3'}	5'-C gC ^{3'}	5'-gTg ^{3'}	5'-CA T ^{3'}	5'-CTA ^{3'}				
		76										##			55	70	57	##			65	##	91				
		5'-CAT ^{3'}										5'-CAT ^{3'}			5'-gC C ^{3'}	5'-CCA ^{3'}	5'-A CA ^{3'}	5'-CAT ^{3'}			5'-gAA ^{3'}	5'-CAG ^{3'}	5'-g gT ^{3'}				
																72	91				65	91					
																5'-CAA ^{3'}	5'-g gT ^{3'}				5'-g gT ^{3'}		5'-g gT ^{3'}				
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Well No.			
																								DPB1 allele ⁴			
						31																		*010101-010103			
												?			?			?				?		*0102			
																						47		*020102, 020104-020105			
																						47		*020103			
																						47		*020106			
																						47		*0202			
												?			?			?				?		*0203			
																								*030101-030102			
						31																					

Lot-specific Information

Length of spec.	245	220	100	140	235	165	160	210	165	220	190	80	180	105	200	80	260	180	200	235	100	185	145	195
PCR product																								265
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*040101-040102			3	4				8			11										22			
*0402								8	9		11					16								
*0403								8	9	10														24
*0501								8	9				13	14									23	24
*0502	1	2														16	17	18	19	20	21			
*0601									9			12					17	18	19					
*0602								8	9		11					16								
*0801					5			8		10		12												24
*0802					5			8	9	10			13											24
*0901												12					17	18		20	21			
*0902	1		3			6	7										17			20				
*1001												12					17			20				
*1002									9		11					16								
*110101-110102			3														17		19					
*1102									9		11	12												
*1301	1		3			6	7										17			20				
*1302	1		3			7											17			20				
*1401																16	17	18	19	20	21			
*1402	1	2														16	17	18	19	20	21			
*1501			3																					
*1502								8	9						15								23	
*1601								8	9	10		12												24
*1602									9		11	12												
*1701									9			12					17	18						
*1702	1	2												14			17		19	20			23	
*1801		2							9							16								
*1802								8	9	10	11	12												
*1901					5			8	9	10			13											24
*1902								8	9						15	16							23	
*200101-200102		2							9							16	17	18	19					
*2002			3																			22		
*2101									9					14			17							
*2102	1	2	3	4	5	6	7																	
*2201								8	9	10			13	14										24
*2301								8	9		11													
*2401				4				8			11		13									22		
*2501	1	2														16	17		19	20				
*260101-260102	1	2	3	4		6	7										17			20				
*2701		2	3	4													17							
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

190	75	95	200	220	185	120	75	140	210	195	260	185	100	210	95	75	140	65	195	120	205	165	210	Length of spec. PCR product
265							195					255			180	230	185	190	245	190		255	280	
																	285		275	245				
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Well No.
																					47			*040101-040102
												37												*0402
						31						?	38	?			?			?				*0403
25						31											43							*0501
																	43							*0502
	26	27										?			?		?				?			*0601
																					47			*0602
						31						?			?		?				?			*0801
						31															47			*0802
	26		28	29	30																			*0901
			28			31		33						40										*0902
			28	29		31						?			?		?				?			*1001
		27										?	39	?			?			45	?			*1002
						31	32					?			?		?				?			*110101-110102
			28									?			?		?				?			*1102
			28			31		33																*1301
			28			31		33				?			?		?				?			*1302
					30				34															*1401
												?			?		?	44			?			*1402
									35	36	37													*1501
												?	38	?			?				?			*1502
						31						?			?		?				?			*1601
			28	29								?			?		?				?			*1602
	26	27	28	29	30							?			?		?				?			*1701
25						31						?			?		?				?			*1702
										36		?			?		?				?			*1801
												?			?		?			45	?			*1802
						31											43							*1901
												?			?		?				?			*1902
		27										?			?		?				?			*200101-200102
			28					33				?			?		?			45	?			*2002
25			28			31						?			?		?				?			*2101
						31						?			?		?	44			?			*2102
25						31						?			?		?				?			*2201
												?	38	?			?				?			*2301
												?			?		?				?			*2401
						31						?			?		?				?			*2501
			28			31						?			?		?				?			*260101-260102
			28			31						?			?		?				?			*2701
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Well No.

Lot-specific Information

Length of spec.	245	220	100	140	235	165	160	210	165	220	190	80	180	105	200	80	260	180	200	235	100	185	145	195
PCR product																								265
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*2801				4												16								
*2901	1											12					17	18	19	20	21			
*3001									9								17							
*3101			3	4																				24
*3201								8	9	10	11	12												
*3301			3					8		10	11											22		
*3401									9														23	
*3501																16	17	18		20	21			
*3601		2							9					14			17						23	
*3701	1											12					17			20				
*3801								8	9				13	14									23	24
*3901			3	4				8														22		
*4001			3	4				8																
*410101-410102									9	10	11	12												
*4401	1											12					17	18	19	20	21			
*4501																16	17		19	20				
*4601								8	9	10	11	12												
*4701								8	9	10	11		13											
*4801								8	9	10		12			15									
*4901				4				8								16						22		
*5001	1	2			5											16					21			
*5101				4				8			11					16						22		
*5201	1	2															17		19	20				
*5301				4				8								16								
*5401																	17			20				
*5501									9								17							
*5601	1	2	3	4			7										17		19	20				
*5701					5											16					21			24
*5801									9								17							
*5901									9		11					16								
*6001								8	9		11					16								
*6101N	1	2														16	17	18	19	20	21			
*6201								8	9														23	
*6301								8	9														23	24
*6401N									9			12					17	18	19					
*6501			3	4	5	6	7	8																24
*6601			3	4							11											22		
*6701																	17		19	20				
*6801					5			8								16								24
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Lot-specific Information

190	75	95	200	220	185	120	75	140	210	195	260	185	100	210	95	75	140	65	195	120	205	165	210	Length of spec. PCR product
265							195					255			180	230	185	190	245	190		255	280	
																	285		275	245				
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Well No.
	26										36	37		39	?			?				?		*2801
												?			?			?				?		*2901
			28	29		31						?			40			?				?		*3001
						31						?		39	?	41		?				?		*3101
												?			?		42	?				?		*3201
								33				?			?			?				?		*3301
											36	?	38	39	?	41		43				?		*3401
			28		30							?			?			?				?		*3501
25			28			31						?			?			?				?		*3601
			28			31						?			?			?				?		*3701
25						31						?			?			?	44			?		*3801
												?			?			?		45		?		*3901
											36	37			?			?				?		*4001
												?			?			?			46	?		*410101-410102
25	26											?			?			?				47		*4401
						31			34			?			?			?				?		*4501
	26	27										?			?			?		45		?		*4601
												?			?			?				?		*4701
												?			?			?				?		*4801
												?			?			?		45		?		*4901
												?			?			?				?		*5001
												?			?			?				?		*5101
						31						?	38		?			?				?		*5201
											36	37			?			?				?		*5301
			28	29		31						?			40			?				?		*5401
			28	29		31						?	38		?			?				?		*5501
						31						?			?			?				?		*5601
												?		39	?			?				?		*5701
25			28	29		31						?	38		?			?				?		*5801
												?		39	?			?				?		*5901
												?			?			?		46		?		*6001
												?			?			?				?		*6101N
											36	?	38		?			43				?		*6201
25						31						?	38		?			?				?		*6301
	26	27										?			?			?	44			?		*6401N
						31						?			?			?				?		*6501
			28									?			?			?				?		*6601
						31			34			?	38		?			?				?		*6701
						31						?			?			?				?		*6801
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Well No.

Lot-specific Information

Length of spec.	245	220	100	140	235	165	160	210	165	220	190	80	180	105	200	80	260	180	200	235	100	185	145	195
PCR product																								265
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
*6901									9								17	18	19					
*7001																16	17	18	19	20	21			
*7101								8	9	10	11													
*7201			3	4							11											22		
*7301					5						11					16								
*7401			3																19					
*7501					5			8			11					16								
*7601				4			7									16	17	18	19	20	21			
*7701								8	9		11					16								
*7801	1	2														16	17	18	19	20	21			
*7901	1	2														16	17		20					
*8001								8	9		11					16								
*8101								8		10	11	12										22		
*8201								8	9		11					16								
*8301									9		11					16								
*8401					5			8																24
*8501		2	3	4													17							
*8601									9		11	12						18						
*8701		2							9								17		19					
*8801	1											12					17	18		20	21			
*8901		2	3	4																				
*9001	1	2	3	4	5		7																	
*9101									9							16	17	18	19					
*9201	1	2		4			7									16	17	18	19	20	21			
*9301									9			12					17							
*9401								8	9		11													
*9501									9	10					15									
*9601			3	4				8														22		
*9701								8	9				13	14								23	24	
*9801									9							16	17	18						
*9901			3	4				8			11				15							22		
DPB1 allele ⁴																								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

¹The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 430 base pairs, for most wells, or a band of 515 base pairs, for some wells. Well number 1 contains the primer pair giving rise to the longer, 515 bp, internal positive control band in order to help in the correct orientation of the DPB1 typing. In addition, wells number 2, 5, 8, 10, 11, 12, 17, 20, 24, 25, 28, 29, 34, 36, 37, 38, 39, 41, 46, 47 and 48 contain the primer pair giving rise to the longer, 515 bp, internal positive control band in order to allow kit identification.

190	75	95	200	220	185	120	75	140	210	195	260	185	100	210	95	75	140	65	195	120	205	165	210	Length of spec. PCR product
265							195					255			180	230	185	190	245	190		255	280	
																	285		275	245				
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Well No.
	27											?			?			?				?		*6901
25												?			?			?				?		*7001
												?	38		?			?				?		*7101
												?		39	?			?				?		*7201
												?		39	?			?				?		*7301
										35		37			?			?				?		*7401
												?			?			?				?		*7501
												?			?			?				?		*7601
					30				34			?			?			?				?		*7701
							32					?			?	41		?				?		*7801
												?			?			?				?		*7901
		28				31						?			?			?				?		*8001
		27										?			?			?		45		?		*8101
								33				?			?			?				?		*8201
												?			?		42	?				?		*8301
												?			?			?		46	?			*8401
						31						?			?			?				?		*8501
		28				31						?			?			?				?	48	*8601
	26	27	28	29	30							?			?			?		45		?		*8701
						31						?	38		?			?				?		*8801
	26		28									?			?			?				?		*8901
						31						?			?			?				?		*9001
						31						?			?			?				?		*9101
	27				30				34			?			?			?				?		*9201
												?			?			?				?		*9301
												?			?			?				?		*9401
												?	38	39	?			?				?		*9501
												?			?			?		45	46	?		*9601
25						31						?			?			?				?		*9701
		27	28		30							?			?			?				?		*9801
												?			?			?				?		*9901
																								DPB1 allele ⁴
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	Well No.

In the presence of a specific amplification the intensity of the control band often decreases.

²The codon, in the 2nd exon, matching the specificity-determining 3'-end of the primer is given. Codon numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given. Empty spaces indicate codon boundaries.

³The codon, in the 2nd exon, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Codon numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given. Empty spaces indicate codon boundaries.



⁴The sequence of the DPB1*02011 allele has been shown to be identical to DPB1*02012.
DPB1*0701 has never been assigned.
DPB1*1201 has never been assigned.

The sequence of the DPB1*4201 allele has been shown to be identical to DPB1*3101.

The sequence of the DPB1*4301 allele has been shown to be identical to DPB1*2801.

⁵Matching sequences within the 1st intron.

⁶Primer mix 24: Specific PCR fragment of 195 bp in the DPB1*0203 allele. Specific PCR fragment of 265 bp in the DPB1*0302, 0403, 0501, 0801, 0802, 1601, 1901, 2201, 3101, 3801, 5701, 6301, 6501, 6801, 8401 and 9701 alleles.

Primer mix 25: Specific PCR fragment of 190 bp in the DPB1*0501, 1702, 2101, 2201, 3601, 3801, 4401, 5801, 6301 and 9701 alleles. Specific PCR fragment of 265 bp in the DPB1*7001 allele.

Primer mix 32: Specific PCR fragment of 75 bp in the DPB1*7801 allele. Specific PCR fragment of 195 bp in the DBB1*110101-110102 alleles.

Primer mix 37: Specific PCR fragment of 185 bp in the DPB1*1501, 2801, 5301, 4001 and 7401 alleles. Specific PCR fragment of 255 bp in the DPB1*0402 allele. The 3rd exon of many DPB1 alleles is not sequenced and thus the primer pair in primer mix 47 matching the DPB1*0402 sequence motif in the 3rd exon may amplify other DPB1 alleles.

Primer mix 40: Specific PCR fragment of 95 bp in the DPB1*0902 allele. Specific PCR fragment of 180 bp in the DPB1*3001 and 5401 alleles. The 1st exon of most DPB1 alleles is not sequenced and thus the primer pair in primer mix 40 matching the DPB1*0902 sequence motif in the 1st exon may amplify other DPB1 alleles.

Primer mix 40 may give rise to nonspecific amplifications.

Primer mix 41: Specific PCR fragment of 75 bp in the DPB1*7701 allele. Specific PCR fragment of 230 bp in the DPB1*3101, 3401 and 9401 alleles.

Primer mix 42: Specific PCR fragment of 140 bp in the DPB1*9701 allele. Specific PCR fragment of 185 bp in the DPB1*3201 allele. Specific PCR fragment of 285 bp in the DPB1*8201 allele.

Primer mix 43: Specific PCR fragment of 65 bp in the DPB1*0501, 0502 and 1901 alleles. Specific PCR fragment of 190 bp in the DPB1*3401 and 6201 alleles. The 4th exon of most DPB1 alleles is not sequenced and thus the primer pair in primer mix 43 matching the DPB1*0501, 0502 and 1901 sequence motif in the 4th exon may amplify other DPB1 alleles.

Primer mix 44: Specific PCR fragment of 195 bp in the DPB1*1402 and 2102 alleles. Specific PCR fragment of 245 bp in the DPB1*3801 allele. Specific PCR fragment of 275 bp in the DPB1*6401N allele.

Primer mix 45: Specific PCR fragment of 120 bp in the DPB1*1002, 4601, 8001 and 8601 alleles. Specific PCR fragment of 190 bp in the DPB1*2002, 3901, 4901 and 9601 alleles. Specific PCR fragment of 245 bp in the DPB1*1802 allele.

Primer mix 47: Specific PCR fragment of 165 bp in the DPB1*4401 allele. Specific PCR fragment of 255 bp in the DPB1*020102-0202, 040101-040102, 0602 and 0802 alleles.

The 3rd exon of many DPB1 alleles is not sequenced and thus the primer pair in primer mix 47 matching the DPB1*0201, 0202, 0401, 0602 and 0802 sequence motif in the 3rd exon may amplify other DPB1 alleles.

Primer mix 48: Specific PCR fragment of 210 bp in the DPB1*6101N allele. Specific PCR fragment of 280 bp in the DPB1*8501 allele.

'w', might be weakly amplified.

'?', nucleotide sequence information not available for the primer matching sequence.

CELL LINE VALIDATION SHEET																				
DPB1 SSP kit																				
					Well															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				Lot No.:	200737501	200737502	200737503	200853204	200737505	200737506	200737507	200737508	200737509	200737510	200737511	200737512	200737513	200737514	200737515	200737516
	IHCW cell line		DPB1																	
1	9001	SA	*0402		-	-	-	-	-	-	-	+	+	-	+	-	-	-	-	+
2	9280	LK707	*0401		-	-	+	+	-	-	-	+	-	-	+	-	-	-	-	+
3	9011	E4181324	*0201	*0401	-	-	+	+	-	-	-	+	+	+	+	+	-	-	-	-
4	9275	GU373	*0402	*1701	-	-	-	-	-	-	-	+	+	-	+	+	-	-	-	+
5	9009	KAS011	*0401	*1401	-	-	+	+	-	-	-	+	-	-	+	-	-	-	-	+
6	9353	SM	*0501		-	-	-	-	-	-	-	+	+	-	-	-	+	+	-	-
7	9020	QBL	*0202		-	-	-	-	-	-	-	+	+	+	-	-	+	+	+	-
8	9007	DEM	*0301	*0401	+	+	+	+	-	-	-	+	-	-	+	-	-	-	-	-
9	9026	YAR	*0401		-	-	+	+	-	-	-	+	-	-	+	-	-	-	-	-
10	9107	LKT3	*0501		-	-	-	-	-	-	-	+	+	-	-	-	+	+	-	-
11	9051	PITOUT	*0401		-	-	+	+	-	-	-	+	-	-	+	-	-	-	-	-
12	9052	DBB	*0401		-	-	+	+	-	-	-	+	-	-	+	-	-	-	-	-
13	9067	BTB	*0401		-	-	+	+	-	-	-	+	-	-	+	-	-	-	-	-
14	9071	OLGA	*0301	*0402	+	+	-	-	-	-	-	+	+	-	+	-	-	-	-	+
15	9075	DKB	*0401		-	-	+	+	-	-	-	+	-	-	+	-	-	-	-	-
16	9037	SWEIG007	*0402		-	-	-	-	-	-	-	+	+	-	+	-	-	-	-	+
17	9008	WILJON	*0201	*2301	-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-
18	9257	32367	*0402	*1801	-	+	-	-	-	-	-	+	+	-	+	-	-	-	-	+
19	9038	BM16	*0201		-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-
20	9059	SLE005	*0301		+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+
21	9064	AMALA	*0402		-	-	-	-	-	-	-	+	+	-	+	-	-	-	-	+
22	9056	KOSE	*0201	*1301	+	-	+	-	-	+	+	+	+	+	+	+	-	-	-	-
23	9124	IHL	*0201		-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-
24	9035	JBUSH	*0401		-	-	+	+	-	-	-	+	-	-	+	-	-	-	-	-
25	9049	IBW9	*0101		+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-
26	9285	WT49	*0401		-	-	+	+	-	-	-	+	-	-	+	-	-	-	-	-
27	9191	CH1007	*0301	*0902	+	+	+	-	-	+	+	-	-	-	-	-	-	-	-	+
28	9320	BEL5GB	*0201	*0401	-	-	+	+	-	-	-	+	+	+	+	+	-	-	-	-
29	9050	MOU	*0201		-	-	-	-	-	-	-	+	+	+	+	+	-			

CELL LINE VALIDATION SHEET																																	
DPB1 SSP kit																																	
					Lot No.:	Well																											
						17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32												
						200737517	200737518	200737519	200737520	200737521	200737522	200737523	200737524	200737525	200853226	200737527	200737528	200737529	200737530	200737531	200737532												
	IHC cell line		DPB1																														
1	9001	SA	*0402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
2	9280	LK707	*0401		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												
3	9011	E4181324	*0201	*0401	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												
4	9275	GU373	*0402	*1701	+	+	-	-	-	-	-	-	-	-	+	+	+	+	+	-	-												
5	9009	KAS011	*0401	*1401	+	+	+	+	+	+	-	-	-	-	-	-	-	-	+	-	-												
6	9353	SM	*0501		-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	+	-												
7	9020	QBL	*0202		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
8	9007	DEM	*0301	*0401	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-												
9	9026	YAR	*0401		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												
10	9107	LKT3	*0501		-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	+	-												
11	9051	PITOUT	*0401		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												
12	9052	DBB	*0401		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												
13	9067	BTB	*0401		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												
14	9071	OLGA	*0301	*0402	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-												
15	9075	DKB	*0401		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												
16	9037	SWEIG007	*0402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
17	9008	WILJON	*0201	*2301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
18	9257	32367	*0402	*1801	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
19	9038	BM16	*0201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
20	9059	SLE005	*0301		+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-												
21	9064	AMALA	*0402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
22	9056	KOSE	*0201	*1301	+	-	-	+	-	-	-	-	-	-	-	-	+	-	-	+	-												
23	9124	IHL	*0201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
24	9035	JBUSH	*0401		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												
25	9049	IBW9	*0101		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-												
26	9285	WT49	*0401		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												
27	9191	CH1007	*0301	*0902	+	+	+	+	+	-	-	-	-	-	-	-	+	-	-	+	-												
28	9320	BEL5GB	*0201	*0401	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												
29	9050	MOU	*0201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
30	9021	RSH	*0101	*0402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-												
31	9019	DUCAF	*0202		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
32	9297	HAG	*0201	*0301	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-												
33	9098	MT14B	*0402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
34	9104	DHIF	*0401		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												
35	9302	SSTO	*0401		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												
36	9024	KT17	*0501		-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	+	-												
37	9065	HHKB	*0401		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												
38	9099	LZL	*0402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
39	9315	CML	*0401	*1401	+	+	+	+	+	+	-	-	-	-	-	-	-	-	+	-	-												
40	9134	WHONP199	*0501		-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	+	-												
41	9055	H0301	*0501		-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	+	-												
42	9066	TAB089	*0202		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
43	9076	T7526	*0902		+	-	-	+	-	-	-	-	-	-	-	-	+	-	-	+	-												
44	9057	TEM	*0401		-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												
45	9239	SHJO	*0301	*0402	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-												
46	9013	SCHU	*0402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
47	9045	TUBO	*0201	*0402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
48	9303	TER-ND	*0201	*0401	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-												

[illegible]

CERTIFICATE OF ANALYSIS

Olerup SSP® DPB1 SSP

Product number: 101.311-24u/04u – without *Taq* pol.
Lot number: 29F
Expiry date: 2010-October-01
Number of tests: 24 tests – Product No. 101.311-24u
 4 tests – Product No. 101.311-04u
Number of wells per test: 48

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2007-375-01	17	2007-375-17	33	2007-375-33
2	2007-375-02	18	2007-375-18	34	2007-375-34
3	2007-375-03	19	2007-375-19	35	2007-375-35
4	2008-532-04	20	2007-375-20	36	2007-375-36
5	2007-375-05	21	2007-375-21	37	2007-375-37
6	2007-375-06	22	2007-375-22	38	2007-375-38
7	2007-375-07	23	2007-375-23	39	2007-375-39
8	2007-375-08	24	2007-375-24	40	2007-375-40
9	2007-375-09	25	2007-375-25	41	2007-375-41
10	2007-375-10	26	2008-532-26	42	2007-375-42
11	2007-375-11	27	2007-375-27	42	2007-375-43
12	2007-375-12	28	2007-375-28	43	2007-375-44
13	2007-375-13	29	2007-375-29	45	2007-375-45
14	2007-375-14	30	2007-375-30	46	2007-375-46
15	2007-375-15	31	2007-375-31	47	2008-532-47
16	2007-375-16	32	2007-375-32	48	2008-532-48

The specificity of each primer solution of the kit has been tested against 48 well characterized IHWC cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 41, 44 and 46 were available. Additional 5'-primers in primer solutions 15, 25 and 32 were not possible to test. Additional 3'-primers in primer solutions 8, 24 and 48 were not possible to test. In primer solutions 41 and 46 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solution 44 it was only possible to test the 3'-primer and one of the 5'-primers, the other the 5'-primer was not possible to test.

Results: No false positive or false negative amplifications were obtained.

Date of approval: 2009-May-26

Approved by:

Quality Control, Supervisor

Declaration of Conformity

Product name: *Olerup* SSP® DPB1
Product number: 101.311-24u/04u
Lot number: 29F

Intended use: DPB1 high resolution histocompatibility testing

Manufacturer: *Olerup* SSP AB
Hasselstigen 1
SE-133 33 Saltsjöbaden, Sweden
Phone: +46-8-717 88 27
Fax: +46-8-717 88 18

We, *Olerup* SSP AB, hereby declare that this product, to which this Declaration of Conformity relates is in conformity with the following Standard(s) and other normative document(s) ISO 9001:2000, ISO 17025:1999 and ISO 13485:2000, following the provisions of the 98/79/EC Directive on *in vitro* diagnostic medical devices, Annex III.

The Technical Construction File is maintained at *Olerup* SSP AB, Hasselstigen 1, SE-133 33 Saltsjöbaden, Sweden.

The Authorized Representative located within the Community is: *Olerup* SSP AB.

Saltsjöbaden, Sweden
2009-May-26

Olle Olerup
Managing Director



ADDRESSES:

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