

Olerup SSP® HLA-B*51

Product number:	101.561-24/03 – including <i>Taq</i> pol. 101.561-24u/03u – without <i>Taq</i> pol.
Lot number:	30E
Expiry date:	2010-February-01
Number of tests:	24 tests – Product No. 101.561-24 3 tests – Product No. 101.561-03
Number of wells per test:	45
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. 30E.

**CHANGES COMPARED TO THE PREVIOUS *OLERUP SSP*®
HLA-B*51 LOT.**

The HLA-B*51 specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup SSP*® HLA-B*51 lot was made (Lot No. X30).

Five wells have been added to the HLA-B*51 kit,
wells **41 to 45**.

The primers of the wells detailed below have been exchanged, added or modified compared to the previous lot.

Well	5'-primer	3'-primer	rationale
13	Exchanged	-	Exchanged primers to decrease tendency to primer dimer artefacts.
41	New	New	New primer pair for the B*5148 allele.
42	New	New	New primer pair for the B*5149 allele.
43	New	New	New primer pair for the B*5150 allele.
44	New	New	New primer pair for the B*5151 allele.
45	New	New	New primer pair for the B*5152 allele.

PRODUCT DESCRIPTION

HLA-B*51 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the B*5101 to B*5152 alleles.

PLATE LAYOUT

Each test consists of 40 PCR reactions in a 48 well cut PCR plate. Wells 46 to 48 are empty.

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	42	44	45	empty	empty	empty

The 48 well cut PCR plate is marked with 'HLA-B*51'.

Well No. 1 is marked with the Lot No. '30E'.

The PCR plates are covered with a PCR-compatible foil.

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

INTERPRETATION

The interpretation of HLA-B*51 SSP subtypings will be influenced by three B*07, B*0809, most B*13, the B*14, many B*15, the B*18, two B*27, most B*35, the B*37, two B*38, seven B*39, several B*40, most B*41, the B*4204, most B*44, the B*45, the B*49, the B*50, the B*52, the B*53, the B*54, the B*55, most B*56, the B*57, the B*58, the B*59, the B*7301, the B*78, the B*82 and the B*8301 alleles when present on the other haplotype.

UNIQUELY IDENTIFIED ALLELES

All the HLA-B*51 alleles, i.e. **B*5101 to B*5152**, recognized by the HLA Nomenclature Committee in January 2008¹ will give rise to unique amplification patterns by the primers in the HLA-B*51 subtyping kit.

The HLA-B*51 subtyping kit cannot distinguish the B*510101, B*510103 to B*510108 alleles, the B*510201 and B*510203 alleles or the B*511301 and B*511302 alleles.

¹HLA-B alleles listed on the IMGT/HLA web page 2008-January-11, release 2.20.0, www.ebi.ac.uk/imgt/hla.

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RESOLUTION IN HOMO- AND HETEROZYGOTES

The 50 HLA-B*51 alleles will give rise to 53 different amplification patterns and these can be combined in 1 431 homozygous and heterozygous combinations. 388 of these genotypes do not give rise to unique amplification patterns. (The different sizes of the specific PCR products generated by primer mixe 9, 10, 14, 15, 18, 21, 25 to 28 and 31 were not considered in these calculations.)

++++-----	-----+--+	-----+---	-----+---	5102,5103 = 510202,5103
+++-+---	-----+--+	-----+---	-----+---	5102,5146 = 510202,5146
+++-+---	-----+--+	-----+---	-----+---	5102,5104 = 510202,5104
+++-+---	-----+--+	-----+---	-----+---	5115,5117 = 5115,5135 =
				5135,5140
++++-+---	-----+--+	-----+---	-----+---	5101,5110 = 510102,5110 =
				5110,5124
+++-+---	-----+--+	-----+---	-----+---	5105,5113 = 5113,5140
+++-+---	-----+--+	-----+---	-----+---	5105,5118 = 5115,5129
+++-+---	-----+--+	-----+---	-----+---	5101,5115 = 5115,5118 =
				5118,5140
+++-+---	-----+--+	-----+---	-----+---	5105,5137 = 5137,5140
+++-+---	-----+--+	-----+---	-----+---	5101,5105 = 5105,5129 =
				5129,5140
+++-+---	-----+--+	-----+---	-----+---	5101,5140 = 510102,5140
+++-+---	-----+--+	-----+---	-----+---	5102,5106 = 510202,5106
+++-+---	-----+--+	-----+---	-----+---	5102,5145 = 510202,5145
+++-+---	-----+--+	-----+---	-----+---	5102,5107 = 510202,5107
+++-+---	-----+--+	-----+---	-----+---	5102,5135 = 510202,5135
+++-+---	-----+--+	-----+---	-----+---	5102,5117 = 510202,5117
+++-+---	-----+--+	-----+---	-----+---	5101,5136 = 510102,5136 =
				5128,5136
+++-+---	-----+--+	-----+---	-----+---	5102,5121 = 510202,5121
+++-+---	-----+--+	-----+---	-----+---	5101,5134 = 510102,5134 =
				5102,5116 = 510202,5116
+++-+---	-----+--+	-----+---	-----+---	5102,5111N = 510202,5111N
+++-+---	-----+--+	-----+---	-----+---	5102,5112 = 510202,5112
+++-+---	-----+--+	-----+---	-----+---	5102,5113 = 510202,5113
+++-+---	-----+--+	-----+---	-----+---	5102,5114 = 510202,5114
+++-+---	-----+--+	-----+---	-----+---	5102,5118 = 510202,5118
+++-+---	-----+--+	-----+---	-----+---	5102,5122 = 510202,5122
+++-+---	-----+--+	-----+---	-----+---	5102,5128 = 510202,5128
+++-+---	-----+--+	-----+---	-----+---	5102,5124 = 510202,5124
+++-+---	-----+--+	-----+---	-----+---	5102,5126 = 510202,5126
+++-+---	-----+--+	-----+---	-----+---	5102,5138 = 510202,5138
+++-+---	-----+--+	-----+---	-----+---	5102,5127N = 510202,5127N
+++-+---	-----+--+	-----+---	-----+---	5102,5130 = 510202,5130
+++-+---	-----+--+	-----+---	-----+---	5102,5137 = 510202,5137
+++-+---	-----+--+	-----+---	-----+---	5102,5132 = 510202,5132
+++-+---	-----+--+	-----+---	-----+---	5102,5133 = 510202,5133 =
				5123,5133 = 5123,5139
+++-+---	-----+--+	-----+---	-----+---	5102,5139 = 510202,5139
+++-+---	-----+--+	-----+---	-----+---	5101,5123 = 510102,5123
+++-+---	-----+--+	-----+---	-----+---	5102,5129 = 510202,5129
+++-+---	-----+--+	-----+---	-----+---	5102,5141N = 510202,5141N
+++-+---	-----+--+	-----+---	-----+---	5102,5143 = 510202,5143
+++-+---	-----+--+	-----+---	-----+---	5102,5148 = 510202,5148
+++-+---	-----+--+	-----+---	-----+---	5102,5149 = 510202,5149
+++-+---	-----+--+	-----+---	-----+---	5102,5151 = 510202,5151
+++-+---	-----+--+	-----+---	-----+---	5102,5152 = 510202,5152

SPECIFICITY TABLE**HLA-B*51 SSP subtyping**

Specificities and sizes of the PCR products of the 45 primer mixes used for HLA-B*51 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-B*51 alleles ³	Other amplified HLA-B alleles ⁴
1⁵	105 bp	800 bp	510101-5106, 5108-5121, 5123, 5124, 5126-5146, 5148-5152	0832, 1807, 350101- 350801, 350803-3518, 3521-3524, 3527, 3529- 3545, 3548, 3550-3562, 3564-3571, 3574, 3575, 3577, 3579, 3580, 3581, 3583, 3584, 3806, 3807, 4406, 520601-520602, 530101-5308, 5310- 5314, 7801-780202, 7804
2^{5,6}	95 bp	800 bp	510101-510108, 5103, 5104, 5106, 5107, 5111N-5114, 5116-5118, 5121, 5122, 5124, 5126- 5130, 5132, 5133, 5135, 5137-5139, 5141N, 5143, 5145, 5146, 5148-5152	1401-1407N, 1537, 1538, 1815, 1819, 3521, 4028, 4051, 520101- 5202, 5204-5209, 5306, 560501-5606, 5621, 5808, 7801-7803, 7805
3	265 bp	1070 bp	510201-510203, 5105, 5110, 5115, 5123, 5134, 5136, 5140	0809, 130201-1304, 1308Q, 1309, 1314, 1316, 1318, 1319, 1504, 1516, 1542, 1567, 1583, 1595, 9537, 2714, 3537, 3560, 390601-390602, 3933, 3934, 40060101- 400602, 4044, 4053, 4070, 4075, 4101, 4105- 4107, 4204, 4415, 4418, 4420, 4447, 4501-4507, 4611, 4901-4905, 5001, 5002, 5004, 5203, 5211,

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				5401-5405N, 5407, 5408N, 5410-5413, 550101-5503, 5505, 5507, 5509-5513, 5515- 5529, 5601, 5607, 5608, 5613-5617, 5619N, 5620, 5901, 5902, 7804
4⁶	255 bp	1070 bp	5103	
5⁶	270 bp	1070 bp	5104, 5146	1822, 3521, 3524, 3581, 3704, 4028, 5302, 5306, 5714, 5809
6⁶	210 bp	1070 bp	5105 ^{weakly} , 510901-5110, 5115, 5119, 5131, 5140	130201-1304, 1308Q, 1309, 1314, 1315, 1318, 1319, 2714, 3537, 3560, 390601-390602, 3933 ^{weakly} , 3934, 40060101-400602, 4044, 4053, 4070, 4075, 4447, 4611, 5203, 5210, 5401-5405N, 5407, 5408N, 5410 ^{weakly} , 5411- 5413, 550201-550202, 5507, 5510, 5512, 5513, 5516, 5518, 5519, 5522, 5523, 5526, 5527, 5601, 5607, 5608, 5614-5617, 5619N, 5620, 5901, 5902, 7301, 7804
7⁶	270 bp	1070 bp	5106, 5145	1401-1407N, 1537, 1538, 180101-1809, 1812-1815, 1817N- 1820, 1823N-1828, 2728, 3932, 3943, 4051
8^{5,6}	105 bp	800 bp	5107	180101-1806, 1808- 1815, 1817N-1828, 352001-352002, 3528, 3572, 370101-3705, 3707-3713, 4903, 520101-520104, 5203- 5205, 5207-5211, 5309, 7805
9^{5,6,7}	85, 195, 215 bp	1070 bp	5108, 5117, 5120, 5135, 5144N	3704
10⁸	160, 245 bp	1070 bp	5110, 5121, 5136	0809, 1542, 1583, 2714, 3560, 390601-390602, 3934, 40060101-

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				400602, 4044, 4053, 4070, 4075, 4101, 4105-4107, 4204, 5401, 5402, 5404, 5405N, 5407, 5408N, 5410, 5411-5413, 550101-5503, 5505, 5507, 5510-5513, 5515-5521, 5523, 5525-5529, 5901, 5902, 7301
11	250 bp	1070 bp	5110, 5116, 5131, 5134	130201-130204, 1308Q, 1309, 1314-1316, 1318, 1319, 2714, 40060101-400602, 4044, 4053, 4070, 4075, 5208, 5509, 5522, 5524, 7301
12	495 bp	1070 bp	5111N	
13⁹	200 bp	1070 bp	5112	
14^{5,10}	105, 125 bp	800 bp	511301-511302, 5120	0832, 9537, 1803, 3529, 3569, 3574-3576, 3584, 3585, 3713, 390601-390602, 3919, 3933, 3934, 4502, 5513, 5606, 7301, 7801, 7803
15^{5,6,11}	100, 230 bp	800 bp	5114, 5119	390601-390602
16	190 bp	1070 bp	5115, 5118, 5135	1303, 1573, 4071, 4410, 4415, 4418, 4501, 4504-4507, 4611, 4901-4903, 5001, 5002, 5004, 5403, 5601, 5602, 5604, 5607, 5608, 5613, 5614, 5616, 5617, 5620, 8201, 8202
17^{5,6}	105 bp	1070 bp	5122	3582, 3585, 3919, 7803
18^{5,6,12}	140, 220 bp	800 bp	5108, 5120, 5128, 5136, 5144N	0809, 1583, 4101, 4105-4107, 4204, 4415, 4418, 4420, 4501-4507, 5520, 5613
19^{5,6}	145 bp	800 bp	5110, 5124	0809, 40060101-400602, 4044, 4053, 4070, 4075, 4101, 4105-4107, 4204, 5411, 5520, 5620, 5902, 7301
20⁵	110 bp	1070 bp	5126	
21^{5,13}	130, 185 bp	1070 bp	5127N, 5138	
22	160 bp	1070 bp	510101, 510103-510201,	1804, 4406, 5306, 7801, 780202, 7803

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			510203-5104, 5106-510901, 5110-5114, 5116-5124, 5126-5146, 5148-5152	
23	210 bp	800 bp		1804, 4058, 560501, 5606, 7801, 780202, 7803
24	210 bp	1070 bp	510101, 510103-510201, 510203-5104, 5106-510901, 5110-5114, 5116-5124, 5126-5146, 5148, 5149, 5151, 5152	4406, 4903, 520102, 520104-5203, 520601- 520602, 5209, 5306, 5808
25^{5,14}	130, 175 bp	1070 bp	5130, 5138	
26^{5,15}	105, 155 bp	800 bp	511301-511302, 5132, 5137	1304, 1504, 1516, 1567, 1595, 9537, 3537, 390601-390602, 3933, 3934, 4502, 4904, 4905, 5513, 5523, 7301
27¹⁶	205, 270, 350 bp	800 bp	5104, 5133, 5139, 5146	1822, 3521, 3524, 3581, 3704, 4028, 5302, 5306, 5714, 5809
28¹⁷	205, 255 bp	1070 bp	5123, 5133	4415, 4418, 4420, 4447, 4501-4503, 4505-4507, 5002
29	245 bp	1070 bp	510101-5103, 5105, 5107- 510902, 5111N- 5115, 5117- 5120, 5122- 5124, 5126- 5130, 5132, 5133, 5135, 5137-5141N, 5143, 5144N, 5148-5152	1303, 1304, 1504, 1516, 1567, 1595, 9537, 3537, 3933, 4415, 4418, 4420, 4447, 4501-4507, 4611, 4901-4905, 5001, 5002, 5004, 520101-5207, 5209-5211, 5403, 5601, 560501-5608, 5613- 5617, 5620, 5621, 5808, 7801-7805
30⁵	105 bp	800 bp	5106	070503 ^{weakly} , 150102, 1509, 400106, 4026
31^{5,18}	105, 225 bp	800 bp	5105, 511301- 511302, 5129, 5137	1304, 1318, 1504, 1516, 1567, 1595, 9537, 3537, 390601-390602, 3933,

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				3934, 4502, 4904, 4905, 5410, 5509, 5513, 5521, 5523, 7301
32	165 bp	1070 bp	5116, 5131, 5134	070503, 400106, 5208
33	195 bp	1070 bp	5141N	
34	260 bp	1070 bp	5142	3545, 3571, 44020101- 4414, 4417, 4419N, 4421-4430, 4432-4436, 4438-4440, 4443-4446, 4448-4453, 4455-4459, 5707, 8301
35	225 bp	1070 bp		3538, 370101-370104, 3703N-3706, 3708, 3710-3713, 44020101- 440204, 4405, 4406, 4408, 4409, 4411, 4412, 4414, 4416, 4417, 4419N, 4421-4425, 4427, 4433, 4434, 4442, 4444, 4448, 4449, 4451- 4453, 4455, 4458N, 4459, 5709, 8301
36	215 bp	1070 bp	5143	
37	165 bp	1070 bp	5144N	
38	205 bp	1070 bp	5137, 5145	1538, 180101-1809, 1812-1815, 1817N- 1820, 1822-1825, 1827, 1828, 3521, 3524, 3943, 5302, 5306, 5714, 5809
39	260 bp	1070 bp	5146	
40	185 bp	1070 bp	510101-5124, 5126-5146, 5148, 5149, 5151, 5152	0736, 0738, 1513, 15170101-151702, 1524, 1587, 4406, 4818, 4903, 520101-5211, 530101-5302, 5304- 5308, 5310, 5314, 570101-5711, 5713- 5716, 5801, 5802, 5804- 5816
41	220 bp	1070 bp	5148	
42⁵	135 bp	800 bp	5149	
43	215 bp	800 bp	5150	
44	290 bp	800 bp	5151	
45	190 bp	1070 bp	5152	

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¹ Alleles 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 HLA-B*49 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, e.g. the primers in wells number 4, 5, 6, 7, 8, 9, 15, 17, 18 and 19 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.

² The 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 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells.

Wells number 1 and 2 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-B*51 subtyping.

In addition, wells number 8, 14, 15, 18, 19, 23, 26, 27, 30, 31, 42 to 44 contain the primer pair giving rise to the shorter, 800 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.

³ For several HLA-B alleles fourth exon nucleotide sequences are not available. In these instances it is not known whether some of the primers of the SSP sets are completely matched with the target sequences or not. We assume that unknown sequences in the fourth exon are conserved within allelic groups.

⁴ Due to the sharing of sequence motifs between HLA-B alleles many non-HLA-B*51 alleles will be amplified by many the HLA-B*51 primer mixes.

⁵ Short specific PCR fragments are less intense and not as sharp as longer specific bands.

⁶ Primer mixes 2, 4, 5, 6, 7, 8, 9, 15, 17, 18 and 19 have a tendency to giving rise to nonspecific amplifications.

⁷ Primer mix 9: Specific PCR fragment of 85 bp in the B*5108, 5120, 5144N and B*3704 alleles. Specific PCR fragment of 195 bp in the B*5135 allele. Specific PCR fragment of 215 bp in the B*5117 allele.

⁸ Primer mix 10: Specific PCR fragment of 160 bp in the B*5110 and B*2714, 40060101-400602, 4044, 4053, 4070, 4075 and 7301 alleles. Specific PCR fragment of 245 bp in the B*5121, 5136 and B*0809, 1542, 1583, 3560, 390601-390602, 3934, 4101, 4105-4107, 4204, 5401, 5402, 5404, 5405N, 5407, 5408N, 5410-5413, 550101-5503, 5505, 5507, 5510-5513, 5515-5521, 5523, 5525-5529 and 5901-5902 alleles.

⁹ Primer mix 13 has a tendency of primer oligomer formation.

¹⁰ Primer mix 14: Specific PCR fragment of 105 bp in the B*511301-511302 and B*390601-390602, 3933, 3934, 4502 and 7301 alleles. Specific PCR fragment of 125 bp in the B*5120 and B*0832, 9537, 1803, 3529, 3569, 3574-3576, 3584, 3585, 3713, 3919, 5513, 5606, 7801 and 7803 alleles.

¹¹ Primer mix 15: Specific PCR fragment of 100 bp in the B*5114 allele. Specific PCR fragment of 230 bp in the B*5119 and B*390601-390602 alleles.

¹² Primer mix 18: Specific PCR fragment of 140 bp in the B*5128 allele. Specific PCR fragment of 220 bp in the B*5108, 5120, 5136, 5144N and B*0809, 1583, 4101, 4105-4107, 4204, 4415, 4418, 4420, 4501-4507, 5520 and 5613 alleles.

¹³ Primer mix 21: Specific PCR fragment of 130 bp in the B*5138 allele. Specific PCR fragment of 185 bp in the B*5127N allele.

¹⁴ Primer mix 25: Specific PCR fragment of 130 bp in the B*5138 allele. Specific PCR fragment of 175 bp in the B*5130 allele.

Primer mix 25 has a tendency of giving rise to primer dimer formation.

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¹⁵Primer mix 26: Specific PCR fragment of 105 bp in the B*511301-511302, 5137 and B*1304, 1504, 1516, 1567, 1595, 9537, 3537, 390601-390602, 3933, 3934, 4502, 4904, 4905, 5513, 5523 and 7301 alleles. Specific PCR fragment of 155 bp in the B*5132 allele.

¹⁶Primer mix 27: Specific PCR fragment of 205 bp in the B*5133 allele. Specific PCR fragment of 270 bp in the B*5104, 5146 and B*1822, 3521, 3524, 3581, 3704, 4028, 5302, 5306, 5714 and 5809 alleles. Specific PCR fragment of 350 bp in the B*5139 allele.

¹⁷Primer mix 28: Specific PCR fragment of 205 bp in the B*5133 allele. Specific PCR fragment of 255 bp in the B*5123 and B*4415, 4418, 4420, 4447, 4501-4503, 4505-4507, 5002.

¹⁸Primer mix 31: Specific PCR fragment of 105 bp in the B*511301-511302, 5137 and B*1304, 1516, 1567, 1595, 3537, 390601-390602, 3934, 4502, 4904, 4905, 5513, 5523 and 7301 alleles. Specific PCR fragment of 225 bp in the B*5105, 5129 and B*1318, 1504, 9537, 3933, 5410, 5509 and 5521 alleles.

INTERPRETATION TABLE**HLA-B*51 SSP subtyping****Amplification patterns of the B*5101 to B*5152 alleles**

	Well ⁵																							
	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.	105	95	265	255	270	210	270	105	85	160	250	495	200	105	100	190	105	140	145	110	130	160	210	210
PCR product									195	245				125	230			220			185			
									215															
Length of int.	800	800	1070	1070	1070	1070	1070	800	1070	1070	1070	1070	1070	800	800	1070	1070	800	800	1070	1070	1070	800	1070
pos. control ¹																								
5'-primer(s) ²	206	527	357	357	355	357	357	206	408	357	357	3rd	165	209	357	404	206	141	357	141	357	141	141	141
	5'-gAC ³	5'-TgA ³	5'-Tgg ³	5'-Tgg ³	5'-TCA ³	5'-Tgg ³	5'-CTC ³	5'-gAC ³	5'-ggT ³	5'-Tgg ³	5'-Tgg ³	5'-CTT ³	5'-AAC ³	5'-ggA ³	5'-Tgg ³	5'-CCC ³	5'-gAC ³	5'-ATT ³	5'-Tgg ³	5'-ATT ³	5'-Tgg ³	5'-ATT ³	5'-ATT ³	5'-ATT ³
									431					357		420		357						
									5'-CgA ³					5'-Tgg ³		5'-TTA ³		5'-Tgg ³						
									540							431								
									5'-gAC ³							5'-CgA ³								
3'-primer(s) ³	272	583	583	571	583	527	583	272	583	477	559	620	322	292	414	559	272	242	463	211	445	259	311	309
	5'-TgA ³	5'-gTg ³	5'-gTA ³	5'-CCC ³	5'-gTg ³	5'-CCA ³	5'-gTg ³	5'-Tgg ³	5'-gTg ³	5'-gCg ³	5'-CTC ³	5'-ggg ³	5'-gTC ³	5'-gTC ³	5'-Tgt ³	5'-Cag ³	5'-Tgc ³	5'-CCC ³	5'-gCg ³	5'-ggT ³	5'-ggA ³	5'-gTT ³	5'-ggT ³	5'-ATC ³
						527				559				419	544			538		502				
						5'-CCA ³				5'-Cgt ³				5'-CgA ³	5'-ggT ³			5'-gTC ³		5'-CTA 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
HLA-B allele ⁴																								
*510101, 510103-510108	1	2																			22		24	
*510102	1	2																						
*510201, 510203	1		3																		22		24	
*510202	1		3																					
*5103	1	2		4																	22		24	
*5104	1	2			5																22		24	
*5105	1		3			w																		
*5106	1	2					7														22		24	
*5107		2						8													22		24	
*5108	1								9									18			22		24	
*510901	1					6															22		24	
*510902	1					6																		
*5110	1		3			6				10	11								19		22		24	
*5111N	1	2										12									22		24	
*5112	1	2											13								22		24	
*511301-511302	1	2												14							22		24	
*5114	1	2													15						22		24	
*5115	1		3			6										16								
*5116	1	2									11										22		24	
*5117	1	2							9												22		24	
*5118	1	2														16					22		24	
*5119	1					6									15						22		24	
*5120	1								9					14				18			22		24	
*5121	1	2								10											22		24	
*5122		2															17				22		24	
*5123	1		3																		22		24	
*5124	1	2																19			22		24	
*5126	1	2																		20	22		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

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101.561-24/03 – including *Taq* polymerase101.561-24u/03u – without *Taq* polymeraseLot No.: **30E**

Lot-specific information

www.olerup.com

Length of spec.	105	95	265	255	270	210	270	105	85	160	250	495	200	105	100	190	105	140	145	110	130	160	210	210
PCR product									195	245				125	230			220			185			
									215															
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
*5127N	1	2																			21	22		24
*5128	1	2																18				22		24
*5129	1	2																				22		24
*5130	1	2																				22		24
*5131	1					6					11											22		24
*5132	1	2																				22		24
*5133	1	2																				22		24
*5134	1		3								11											22		24
*5135	1	2							9							16						22		24
*5136	1		3							10								18				22		24
*5137	1	2																				22		24
*5138	1	2																			21	22		24
*5139	1	2																				22		24
*5140	1		3			6																22		24
*5141N	1	2																				22		24
*5142	1																					22		24
*5143	1	2																				22		24
*5144N	1								9									18				22		24
*5145	1	2					7															22		24
*5146	1	2			5																	22		24
*5148	1	2																				22		24
*5149	1	2																				22		24
*5150	1	2																				22		24
*5151	1	2																				22		24
*5152	1	2																				22		24
*070503																								
*0736, 0738, 1513, 15170101-151702, 1524, 1587, 4818, 570101-5706, 5708, 5710, 5711, 5713, 5715, 5716, 5801, 5802, 5804-5807, 5810N-5816																								
*0809, 4101, 4105- 4107, 4204, 5520			3							10								18	19					
*0832, 3529, 3569, 3574, 3575, 3584	1													14										
*130201-130204, 1308Q, 1309, 1314, 1319, 5522			3			6				11														
*1303, 4611, 5403, 5601, 5607, 5608, 5614, 5616, 5617			3			6										16								
*1304			3			6																		
*1315						6					11													
*1316, 5524			3								11													
*1318			3			6					11													
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

101.561-24/03 – including *Taq* polymerase101.561-24u/03u – without *Taq* polymeraseLot No.: **30E**

Lot-specific information

www.olerup.com

130	105	205	205	245	105	105	165	195	260	225	215	165	205	260	185	220	135	215	290	190	Length of spec.
175	155	270	255			225															PCR product
		350																			
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	Well No.
				29											40						*5127N
				29											40						*5128
				29		31									40						*5129
25				29											40						*5130
							32								40						*5131
	26			29											40						*5132
		27	28	29											40						*5133
							32								40						*5134
				29											40						*5135
															40						*5136
	26			29		31							38		40						*5137
25				29											40						*5138
		27		29											40						*5139
				29											40						*5140
				29				33							40						*5141N
								34							40						*5142
				29							36				40						*5143
				29								37			40						*5144N
													38		40						*5145
	27													39	40						*5146
				29											40	41					*5148
				29											40		42				*5149
				29														43			*5150
				29											40				44		*5151
				29											40					45	*5152
				w			32														*070503
															40						*0736, 0738, 1513,
																					15170101-151702,
																					1524, 1587, 4818,
																					570101-5706, 5708,
																					5710, 5711, 5713,
																					5715, 5716, 5801,
																					5802, 5804-5807,
																					5810N-5816
																					*0809, 4101, 4105-
																					4107, 4204, 5520
																					*0832, 3529, 3569,
																					3574, 3575, 3584
																					*130201-130204,
																					1308Q, 1309, 1314,
																					1319, 5522
				29																	*1303, 4611, 5403,
																					5601, 5607, 5608,
	26			29		31															5614, 5616, 5617
																					*1304
																					*1315
																					*1316, 5524
						31															*1318
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	Well No.

Length of spec.	105	95	265	255	270	210	270	105	85	160	250	495	200	105	100	190	105	140	145	110	130	160	210	210
PCR product									195	245				125	230			220			185			
									215															
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
*1401-1407N, 1537, 4051		2					7																	
*150102, 1509,																								
*1504, 1516, 1567,			3																					
1595, 4904, 4905																								
*1538		2					7																	
*1542, 550101-550104, 5503,			3							10														
5505, 5511, 5515,																								
5517, 5525, 5528,																								
*1573, 4071, 5602,																16								
5604, 8201, 8202																								
*1583			3							10								18						
*9537			3											14										
*180101-1802, 1805, 1806, 1808,																								
1809, 1812-1814,							7	8																
1817N, 1818, 1820,																								
1823N, 1824, 1825,																								
1827, 1828																								
*1803							7	8						14										
*1804							7	8														22	23	
*1807	1						7																	
*1810, 1811, 1821,																								
352001-352002,								8																
3528, 3572, 3702,																								
3707, 3709, 5309																								
*1815, 1819		2					7	8																
*1822					5			8																
*1826							7	8																
*2714			3			6				10	11													
*2728, 3932							7																	
*350101-350801,																								
350803-3518, 3522,																								
3523, 3527, 3530-																								
3536, 3539-3544,																								
3548, 3550-3559,																								
3561, 3562, 3564-	1																							
3568, 3570, 3577,																								
3579, 3580, 3583,																								
3806, 3807, 5303,																								
5311-5313																								
*3521	1	2			5																			
*3524	1				5																			
*3537	1		3			6																		
*3538	1																							
*3545, 3571	1																							
*3560	1		3			6				10														
*3576														14										
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

101.561-24/03 – including *Taq* polymerase101.561-24u/03u – without *Taq* polymeraseLot No.: **30E**

Lot-specific information

www.olerup.com

130	105	205	205	245	105	105	165	195	260	225	215	165	205	260	185	220	135	215	290	190	Length of spec.
175	155	270	255			225															PCR product
		350																			
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	Well No.
																					*1401-1407N, 1537, 4051
					30																*150102, 1509,
	26			29		31															*1504, 1516, 1567, 1595, 4904, 4905
												38									*1538
																					*1542, 550101-550104, 5503, 5505, 5511, 5515, 5517, 5525, 5528, *1573, 4071, 5602, 5604, 8201, 8202
																					*1583
	26			29		31															*9537
													38								*180101-1802, 1805, 1806, 1808, 1809, 1812-1814, 1817N, 1818, 1820, 1823N, 1824, 1825, 1827, 1828
													38								*1803
													38								*1804
													38								*1807
																					*1810, 1811, 1821, 352001-352002, 3528, 3572, 3702, 3707, 3709, 5309
													38								*1815, 1819
	27												38								*1822
																					*1826
																					*2714
																					*2728, 3932
																					*350101-350801, 350803-3518, 3522, 3523, 3527, 3530-3536, 3539-3544, 3548, 3550-3559, 3561, 3562, 3564-3568, 3570, 3577, 3579, 3580, 3583, 3806, 3807, 5303, 5311-5313
		27											38								*3521
		27											38								*3524
	26			29		31															*3537
										35											*3538
								34													*3545, 3571
																					*3560
																					*3576
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	Well No.

101.561-24/03 – including *Taq* polymerase101.561-24u/03u – without *Taq* polymeraseLot No.: **30E**

Lot-specific information

www.olerup.com

Length of spec.	105	95	265	255	270	210	270	105	85	160	250	495	200	105	100	190	105	140	145	110	130	160	210	210
PCR product									195	245				125	230			220			185			
									215															
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
*3581	1				5																			
*3582																	17							
*3585, 3919														14			17							
*370101-370104, 3703N, 3705, 3708, 3710-3712								8																
*3704					5			8	9															
*3706																								
*3713								8						14										
*390601-390602			3			6				10				14	15									
*3933			3			w								14										
*3934			3			6				10				14										
*3943							7																	
*400106																								
*40060101-400602, 4044, 4053, 4070, 4075			3			6				10	11							19						
*4028		2			5																			
*4058																						23		
*44020101-440204, 4405, 4408, 4409, 4411, 4412, 4414, 4417, 4419N, 4421- 4425, 4427, 4433, 4434, 4444, 4448, 4449, 4451-4453, 4455, 4458N, 4459																								
*440301-4404, 4407, 4413, 4426, 4428-4430, 4432, 4435, 4436, 4438- 4440, 4443, 4445, 4446, 4450, 4456N, 4457																								
*4406	1																				22		24	
*4410																16								
*4415, 4418, 4501, 4505-4507			3													16		18						
*4416, 4442																								
*4420, 4503			3															18						
*4447			3			6																		
*4502			3											14				18						
*4504, 5613			3													16		18						
*4901, 4902, 5001, 5004			3													16								
*4903			3					8								16							24	
*5002			3													16								
*520101, 520103, 5204, 5205, 5207	2							8																
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

101.561-24/03 – including *Taq* polymerase101.561-24u/03u – without *Taq* polymeraseLot No.: **30E**

Lot-specific information

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130	105	205	205	245	105	105	165	195	260	225	215	165	205	260	185	220	135	215	290	190	Length of spec.
175	155	270	255			225															PCR product
		350																			
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	Well No.
		27																			*3581
																					*3582
																					*3585, 3919
										35											*370101-370104, 3703N, 3705, 3708, 3710-3712
		27								35											*3704
										35											*3706
										35											*3713
	26					31															*390601-390602
26				29		31															*3933
26						31															*3934
																					*3943
					30		32						38								*400106
																					*40060101-400602, 4044, 4053, 4070, 4075
		27																			*4028
																					*4058
																					*44020101-440204, 4405, 4408, 4409, 4411, 4412, 4414, 4417, 4419N, 4421- 4425, 4427, 4433, 4434, 4444, 4448, 4449, 4451-4453, 4455, 4458N, 4459
																					*440301-4404, 4407, 4413, 4426, 4428-4430, 4432, 4435, 4436, 4438- 4440, 4443, 4445, 4446, 4450, 4456N, 4457
										34											*4406
										34					40						*4410
										34											*4415, 4418, 4501, 4505-4507
			28	29																	*4416, 4442
			28	29						35											*4420, 4503
			28	29																	*4447
	26		28	29		31															*4502
				29																	*4504, 5613
				29																	*4901, 4902, 5001, 5004
				29											40						*4903
			28	29																	*5002
				29											40						*520101, 520103, 5204, 5205, 5207
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	Well No.

Length of spec.	105	95	265	255	270	210	270	105	85	160	250	495	200	105	100	190	105	140	145	110	130	160	210	210
PCR product									195	245				125	230			220			185			
									215															
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
*520102, 520104, 5209		2						8																24
*5202, 5808		2																						24
*5203			3			6		8																24
*520601-520602	1	2																						24
*5208		2						8			11													
*5210						6		8																
*5211			3					8																
*530101-530104, 5304, 5305, 5307, 5308, 5310, 5314	1																							
*5302	1				5																			
*5306	1	2			5																	22		24
*5401, 5402, 5404, 5405N, 5407, 5408N, 5412, 5413, 550201-550202, 5507, 5510, 5512, 5516, 5518, 5519, 5526, 5527, 5901			3			6				10														
*5410			3			w				10														
*5411, 5902			3			6				10								19						
*5509			3								11													
*5513			3			6				10				14										
*5521			3							10														
*5523			3			6				10														
*560501		2																					23	
*560502, 5621		2																						
*5606		2												14									23	
*5615			3			6																		
*5619N			3			6																		
*5620			3			6										16		19						
*5707																								
*5709																								
*5714, 5809					5																			
*7301						6				10	11			14				19						
*7801, 780202	1	2												14								22	23	
*780201	1	2																						
*7803		2												14			17					22	23	
*7804	1		3			6																		
*7805		2						8																
*8301																								
HLA-B 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

101.561-24/03 – including *Taq* polymerase101.561-24u/03u – without *Taq* polymeraseLot No.: **30E**

Lot-specific information

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130	105	205	205	245	105	105	165	195	260	225	215	165	205	260	185	220	135	215	290	190	Length of spec.
175	155	270	255			225															PCR product
		350																			
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	Well No.
				29											40						*520102, 520104, 5209
				29											40						*5202, 5808
				29											40						*5203
				29											40						*520601-520602
							32								40						*5208
				29											40						*5210
				29											40						*5211
															40						*530101-530104, 5304, 5305, 5307, 5308, 5310, 5314
		27										38		40							*5302
		27										38		40							*5306
																					*5401, 5402, 5404, 5405N, 5407, 5408N, 5412, 5413, 550201-550202, 5507, 5510, 5512, 5516, 5518, 5519, 5526, 5527, 5901
						31															*5410
						31															*5411, 5902
						31															*5509
	26					31															*5513
						31															*5521
	26					31															*5523
				29																	*560501
				29																	*560502, 5621
				29																	*5606
				29																	*5615
				29																	*5619N
																					*5620
								34							40						*5707
										35					40						*5709
		27										38		40							*5714, 5809
	26					31															*7301
				29																	*7801, 780202
				29																	*780201
				29																	*7803
				29																	*7804
				29																	*7805
								34	35												*8301
																					HLA-B allele ⁴
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	Well No.

101.561-24/03 – including *Taq* polymerase
101.561-24u/03u – without *Taq* polymerase

Lot No.: **30E**

Lot-specific information

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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 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells.

Wells number 1 and 2 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-B*51 subtyping. .

In addition, wells number 8, 14, 15, 18, 19, 23, 26, 27, 30, 31 and 42 to 44 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

²The nucleotide position, in the 2nd, 3rd or 4th exon or 3rd intron, matching the specificity-determining 3'-end of the primer is given. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

³The nucleotide position, in the 2nd, 3rd or 4th exon, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

⁴The B*5125 nucleotide sequence has been shown to be identical to B*5122.

The B*5147 nucleotide sequence has been renamed to B*510902.

⁵Primer mix 9: Specific PCR fragment of 85 bp in the B*5108, 5120, 5144N and B*3704 alleles. Specific PCR fragment of 195 bp in the B*5135 allele. Specific PCR fragment of 215 bp in the B*5117 allele.

Primer mix 10: Specific PCR fragment of 160 bp in the B*5110 and B*2714, 40060101-400602, 4044, 4053, 4070, 4075 and 7301 alleles. Specific PCR fragment of 245 bp in the B*5121, 5136 and B*0809, 1542, 1583, 3560, 390601-390602, 3934, 4101, 4105-4107, 4204, 5401, 5402, 5404, 5405N, 5407, 5408N, 5410-5413, 550101-5503, 5505, 5507, 5510-5513, 5515-5521, 5523, 5525-5529 and 5901-5902 alleles.

Primer mix 14: Specific PCR fragment of 105 bp in the B*511301-511302 and B*390601-390602, 3933, 3934, 4502 and 7301 alleles. Specific PCR fragment of 125 bp in the B*5120 and B*0832, 9537, 1803, 3529, 3569, 3574-3576, 3584, 3585, 3713, 3919, 5513, 5606, 7801 and 7803 alleles.

Primer mix 15: Specific PCR fragment of 100 bp in the B*5114 allele. Specific PCR fragment of 230 bp in the B*5119 and B*390601-390602 alleles.

Primer mix 18: Specific PCR fragment of 140 bp in the B*5128 allele. Specific PCR fragment of 220 bp in the B*5108, 5120, 5136, 5144N and B*0809, 1583, 4101, 4105-4107, 4204, 4415, 4418, 4420, 4501-4507, 5520 and 5613 alleles.

Primer mix 21: Specific PCR fragment of 130 bp in the B*5138 allele. Specific PCR fragment of 185 bp in the B*5127N allele.

Primer mix 25: Specific PCR fragment of 130 bp in the B*5138 allele. Specific PCR fragment of 175 bp in the B*5130 allele.

Primer mix 26: Specific PCR fragment of 105 bp in the B*511301-511302, 5137 and B*1304, 1504, 1516, 1567, 1595, 9537, 3537, 390601-390602, 3933, 3934, 4502, 4904, 4905, 5513, 5523 and 7301 alleles. Specific PCR fragment of 155 bp in the B*5132 allele.

Primer mix 27: Specific PCR fragment of 205 bp in the B*5133 allele. Specific PCR fragment of 270 bp in the B*5104, 5146 and B*1822, 3521, 3524, 3581, 3704, 4028, 5302, 5306, 5714 and 5809 alleles. Specific PCR fragment of 350 bp in the B*5139 allele.

Primer mix 28: Specific PCR fragment of 205 bp in the B*5133 allele. Specific PCR fragment of 255 bp in the B*5123 and B*4415, 4418, 4420, 4447, 4501-4503, 4505-4507, 5002.

Primer mix 31: Specific PCR fragment of 105 bp in the B*511301-511302, 5137 and B*1304, 1516, 1567, 1595, 3537, 390601-390602, 3934, 4502, 4904, 4905, 5513, 5523 and 7301 alleles. Specific PCR fragment of 225 bp in the B*5105, 5129 and B*1318, 1504, 9537, 3933, 5410, 5509 and 5521 alleles.

'w', might be weakly amplified.

101.561-24u/03u – without *Taq* polymerase

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[illegible]

101.561-24/03 – including *Taq* polymerase101.561-24u/03u – without *Taq* polymeraseLot No.: **30E**

Lot-specific information

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CELL LINE VALIDATION SHEET					Well															
HLA-B*51 SSP subtyping kit																				
				Prod. No.:	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
					200615517	200615518	200615519	200615520	200615521	200615522	200615523	200615524	200615525	200615526	200615527	200615528	200615529	200615530	200615531	200615532
	IHC cell line	B*																		
1	9001 SA	*0702			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707	*5201	*7301		-	-	+	-	-	-	-	-	-	+	-	-	+	-	+	-
3	9011 E4181324	*52011			-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
4	9275 GU373	*1510	*5301		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009 KAS011	*3701			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353 SM	*3901	*5101		-	-	-	-	-	+	-	+	-	-	-	-	+	-	-	-
7	9020 QBL	*1801			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	9007 DEM	*5701			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026 YAR	*3801			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107 LKT3	*5401			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051 PITOUT	*4403			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052 DBB	*5701			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9067 BTB	*2705			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071 OLGA	*1501	*1520		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075 DKB	*4001			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037 SWEIG007	*4002			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9008 WILJON	*1801			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257 32367	*1401	*5601		-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
19	9038 BM16	*1801			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	9059 SLE005	*4001			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064 AMALA	*1501			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE	*3503			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124 IHL	*4002	*5602		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035 JBUSH	*3801			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049 IBW9	*1402			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285 WT49	*5801			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191 CH1007	*0705	*5101		-	-	-	-	-	+	-	+	-	-	-	-	+	-	-	-
28	9320 BEL5GB	*4402	*4403		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050 MOU	*4403			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021 RSH	*4201			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019 DUCAF	*1801			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	9297 HAG	*4102			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B	*4001			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104 DHIF	*3801			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302 SSTO	*4402			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17	*1501	*3501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065 HHKB	*0702			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL	*1501			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML	*0801	*2705		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134 WHONP199	*1302	*4601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055 H0301	*1402			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066 TAB089	*4601			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526	*4601			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM	*3801			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239 SHJO	*4201	*5001		-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
46	9013 SCHU	*0702			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO	*5101			-	-	-	-	-	+	-	+	-	-	-	-	+	-	-	-
48	9303 TER-ND	*3501	*4403		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

101.561-24/03 – including *Taq* polymerase101.561-24u/03u – without *Taq* polymeraseLot No.: **30E**

Lot-specific information

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CELL LINE VALIDATION SHEET																		
HLA-B*51 SSP subtyping kit																		
					Well													
						33	34	35	36	37	38	39	40	41	42	43	44	45
				Prod. No.:		200729533	200729534	200729535	200729536	200729537	200729538	200729539	200729540	200843541	200843542	200843543	200843544	200843545
	IHWC cell line		B*															
1	9001	SA	*0702		-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280	LK707	*5201	*7301	-	-	-	-	-	-	-	-	+	-	-	-	-	-
3	9011	E4181324	*52011		-	-	-	-	-	-	-	-	+	-	-	-	-	-
4	9275	GU373	*1510	*5301	-	-	-	-	-	-	-	-	+	-	-	-	-	-
5	9009	KAS011	*3701		-	-	+	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*3901	*5101	-	-	-	-	-	-	-	-	+	-	-	-	-	-
7	9020	QBL	*1801		-	-	-	-	-	+	-	-	-	-	-	-	-	-
8	9007	DEM	*5701		-	-	-	-	-	-	-	-	+	-	-	-	-	-
9	9026	YAR	*3801		-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*5401		-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*4403		-	+	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*5701		-	-	-	-	-	-	-	-	+	-	-	-	-	-
13	9067	BTB	*2705		-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*1501	*1520	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*4001		-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*4002		-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9008	WILJON	*1801		-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	9257	32367	*1401	*5601	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	9038	BM16	*1801		-	-	-	-	-	+	-	-	-	-	-	-	-	-
20	9059	SLE005	*4001		-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*1501		-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*3503		-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*4002	*5602	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	9035	JBUSH	*3801		-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*1402		-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*5801		-	-	-	-	-	-	-	-	+	-	-	-	-	-
27	9191	CH1007	*0705	*5101	-	-	-	-	-	-	-	-	+	-	-	-	-	-
28	9320	BEL5GB	*4402	*4403	-	+	+	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*4403		-	+	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*4201		-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019	DUCAF	*1801		-	-	-	-	-	+	-	-	-	-	-	-	-	-
32	9297	HAG	*4102		-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*4001		-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*3801		-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*4402		-	+	+	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*1501	*3501	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*0702		-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099	LZL	*1501		-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*0801	*2705	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*1302	*4601	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*1402		-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*4601		-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*4601		-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*3801		-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*4201	*5001	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013	SCHU	*0702		-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045	TUBO	*5101		-	-	-	-	-	-	-	-	+	-	-	-	-	-
48	9303	TER-ND	*3501	*4403	-	+	-	-	-	-	-	-	-	-	-	-	-	-

101.561-24/03 – including *Taq* polymerase
 101.561-24u/03u – without *Taq* polymerase

Lot No.: **30E**

Lot-specific information

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CERTIFICATE OF ANALYSIS**Olerup SSP® HLA-B*51 SSP**

Product number:

101.561-24/03 – including *Taq* pol.101.561-24u/03u – without *Taq* pol.

Lot number:

30E

Expiry date:

2010-February-01

Number of tests:

24 tests – Product No. 101.561-24

3 tests – Product No. 101.561-03

Number of wells per test:

45

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2006-155-01	17	2006-155-17	33	2007-295-33
2	2007-295-02	18	2006-155-18	34	2007-295-34
3	2006-155-03	19	2006-155-19	35	2007-295-35
4	2006-155-04	20	2006-155-20	36	2007-295-36
5	2006-155-05	21	2006-155-21	37	2007-295-37
6	2006-155-06	22	2006-155-22	38	2007-295-38
7	2006-155-07	23	2006-155-23	39	2007-295-39
8	2006-155-08	24	2006-155-24	40	2007-295-40
9	2006-155-09	25	2006-155-25	41	2008-435-41
10	2006-155-10	26	2006-155-26	42	2008-435-42
11	2006-155-11	27	2006-155-27	43	2008-435-43
12	2007-295-12	28	2006-155-28	44	2008-435-44
13	2008-435-13	29	2006-155-29	45	2008-435-45
14	2006-155-14	30	2006-155-30		
15	2006-155-15	31	2006-155-31		
16	2006-155-16	32	2006-155-32		

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 4, 9, 13, 15, 17, 18, 20, 21, 23, 25, 26, 28, 31, 32, 33, 36, 37, 39 and 41 to 45 were available. The specificities of the primers in primer solutions 4, 17, 23, 28, 31 and 32 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solution 9 it was only possible to test one of the 5'-primer and the 3'-primer, one of the 5'-primers was not possible to test. In primer solutions 36, 39, 41, 42 and 44 it was only possible to test the 3'-primer, the 5'-primer was not possible to test. In primer solutions 13, 20, 21, 26, 32, 37, 43 and 45 it was only possible to test the 5'-primer, the 3'-primer was not possible to test. In primer solution 15 it was only possible to test the 5'-primer and one of the 3'-primers, two of the 3'-primers were not possible to test. In primer solution 18 it was only possible to test the 5'-primers and one of the 3'-primers, one of the 3'-primers was not possible to test. In primer solution 14 one additional primer pair was tested by separately adding one 5'-primer or one 3'-primer.

101.561-24/03 – including *Taq* polymerase101.561-24u/03u – without *Taq* polymeraseLot No.: **30E**

Lot-specific information

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

Date of approval: 2008-March-10

Approved by:

Quality Control, Supervisor

101.561-24/03 – including *Taq* polymerase
101.561-24u/03u – without *Taq* polymerase

Lot No.: **30E**

Lot-specific information

www.olerup.com

Declaration of Conformity

Product name: Olerup SSP® HLA-B*51
Product number: 101.561-24/03, 101.561-24u/03u
Lot number: 30E

Intended use: HLA-B*51 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 and ISO 13485:2003, following the provisions of the 98/79/EC Directive on *in vitro* diagnostic medical devices, Annex II List B, conformity assessed using Annex IV, as transposed into the national laws of the Member States of the European Union.

The Technical Documentation 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.

Notified Body: Lloyd's Register Quality Assurance Limited, Hiramford, Middlemarch Office Village, Siskin Drive, Coventry CV3 4FJ, United Kingdom. (Notified Body number: 0088.)

Saltsjöbaden, Sweden
2008-March-10

Olle Olerup
Managing Director

101.561-24/03 – including *Taq* polymerase
101.561-24u/03u – without *Taq* polymerase

Lot No.: **30E**

Lot-specific information

www.olerup.com**ADDRESSES:****Manufacturer:****Olerup SSP AB**, Hasselstigen 1, SE-133 33 Saltsjöbaden, Sweden.**Tel:** +46-8-717 88 27**Fax:** +46-8-717 88 18**E-mail:** info-ssp@olerup.com**Web page:** <http://www.olerup.com>**Distributed by:****Olerup GmbH**, Löwengasse 47 / 6, AT-1030 Vienna, Austria.**Tel:** +43-1-710 15 00**Fax:** +43-1-710 15 00 10**E-mail:** support-at@olerup.com**Web page:** <http://www.olerup.com>**Olerup Inc.**, 901 S. Bolmar St., Suite R, West Chester, PA 19382**Tel:** 1-877-OLERUP1**Fax:** 610-344-7989**E-mail:** info.us@olerup.com**Web page:** <http://www.olerup.com>

For information on *Olerup* SSP distributors worldwide, contact **Olerup GmbH**.