

Olerup SSP® HLA-B*27

Product number:	101.521-24u/04u – without <i>Taq</i> pol.
Lot number:	53G
Expiry date:	2011-November-01
Number of tests:	24 test – Product No. 101.521-24u 4 tests – Product No. 101.521-04u
Number of wells per test:	31
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. 53G.

**CHANGES COMPARED TO THE PREVIOUS OLERUP SSP®
HLA-B*27 Lot**

The HLA-B*27 specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup SSP®* HLA-B*27 lot was made (Lot No. 09F).

Seven wells have been added to the HLA-B*27 kit,
wells **25 to 31**.

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	Added	Added	Primer pair added for the B*2747 and B*2753 alleles.
17	Added	Added	Primer pair added for the B*2751 allele, exchanged positive control primer pair.
18	Added	Added	Primer pair added for the B*2749 allele.
19	-	Added	Primer added for the B*2750 allele.
20	-	Added	Primer added for the B*2745 allele.
22	Added	Added	Primer pair added for the B*2755 allele.
25	New	New	New primer pair for the B*2746 allele.
26	New	New	New primer pair for the B*2752 allele.
27	New	New	New primer pair for the B*2757 and B*2758 alleles.

28	New	New	New primer pair for the B*2748 allele.
29	New	New	New primer pair for the B*2754 allele.
30	New	New	New primer pair for the B*2759N allele.
31	New	New	New primer pair for the B*2756 allele.

Changes in revision R01 compared to R00:

1. The Interpretation Table has been corrected to include the missing B*2710 allele.

PRODUCT DESCRIPTION

HLA-B*27 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the B*2701 to B*2759N alleles.

PLATE LAYOUT

Each test consists of 31 PCR reactions in a 32 well cut PCR plate. Well 32 is 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	empty

The 32 well cut PCR plate is marked with 'HLA-B*27' in silver/gray ink.

Well No. 1 is marked with the Lot No. '53G'.

A faint row of numbers is seen between wells 1 and 2 or wells 7 and 8 of the PCR trays. These stem from the manufacture of the trays, and should be disregarded.

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

Please note: When removing each 24 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*27 SSP subtypings will be influenced by nineteen B*07, four B*08, most B*13, twentytwo B*15, the B*18, five B*35, the B*37, the B*3803, ten B*39, most B*40, the B*4211, ten B*44, the B*47, most B*48, six B*51, two B*52, four B*55, three B*57, the B*81 and the B*82 alleles when present on the other haplotype. In addition, the Cw*0223 will be amplified by primer mix 14, the Cw*0334 allele will be amplified by primer mix 16 and the primers in vial 10 will weakly amplify the Cw*0705 allele.

UNIQUELY IDENTIFIED ALLELES

All the HLA-B*27 alleles, i.e. **B*2701 to B*2759N**, recognized by the HLA Nomenclature Committee in October 2009¹ will give rise to unique amplification patterns by the primers in the HLA-B*27 subtyping kit.

The HLA-B*27 subtyping kit cannot distinguish the B*270402 and B*270403 or the B*270502, B*270503 and B*270505 to B*270512 alleles.

¹HLA-A alleles listed on the IMGT/HLA web page 2009-October-19, release 2.27.0, www.ebi.ac.uk/imgt/hla.

RESOLUTION IN HOMO- AND HETEROZYGOTES

The 58 HLA-B*27 alleles will give rise to 59 different amplification patterns (the B*270504 and the B*270502, B*270503 and B*270505 to B*270512 alleles yield different amplification patterns), that can be combined in 1770 homozygous and heterozygous combinations. 884 of these genotypes do not give rise to unique amplification patterns. (The different lengths of the specific PCR products in lanes 2, 12 to 14, 17 to 20, 22, 24 and 27 were not considered in these calculations.)

+++---++	-----+-	-----++	-----	2702,2729 = 2729,2739
+++-----	+++---+-	-----++	-----	2707,2718 = 2718,2727
+++-----	+++---+-	-----++	-----	2717,2718 = 2718,2734
+++-----	+++---+-	+++---++	-----	2714,2718 = 2718,2751
+++-----	+++---+-	---+---++	-----	2718,2732 = 2718,2749
+++-----	+++---+-	---+---++	-----	2718,2738 = 2718,2750
+++-----	+++---+-	---+---++	-----	2709,2718 = 2718,2745
+++-----	+++---+-	-----++	-----	2705,2718 = 2710,2718 = 2718,2728 = 2718,2729 = 2729,2740
+++-----	---+-----	-----+-	-----	2707,2744 = 2727,2744
+++-----	-----+-	-----+-	-----	2717,2744 = 2734,2744
+++-----	-----+-	-----++	-----	2708,2729 = 2729,2744
+++-----	-----	+++---+-	-----	2714,2744 = 2744,2751
+++-----	-----	---+---+-	-----	2732,2744 = 2744,2749
+++-----	-----	---+---+-	-----	2738,2744 = 2744,2750
+++-----	-----	---+---+-	-----	2709,2744 = 2744,2745
+++-----	---+-----	-----+-	-----	2707,2723 = 2723,2727
+++-----	---+-----	-----+-	-----	2717,2723 = 2723,2734
+++-----	---+-----	-----++	-----	2721,2729 = 2723,2729
+++-----	---+-----	+++---+-	-----	2714,2723 = 2723,2751
+++-----	---+-----	---+---+-	-----	2723,2732 = 2723,2749
+++-----	---+-----	---+---+-	-----	2723,2738 = 2723,2750
+++-----	---+-----	---+---+-	-----	2709,2723 = 2723,2745
+++-----	---+-----	-----+-	-----	2705,2723 = 270504,2723
+++-----	---+---+-	-----++	-----	2707,2729 = 2727,2729
+++-----	---+-----	-----+-	-----	2701,2707 = 2701,2727
+++-----	-----+-	-----++	-----	2717,2729 = 2729,2734
+++-----	-----+-	-----+-	-----	2701,2717 = 2701,2734
+++-----	-----+-	+++---++	-----	2714,2729 = 2729,2751
+++-----	-----+-	---+---++	-----	2729,2732 = 2729,2749
+++-----	-----+-	---+---++	-----	2729,2738 = 2729,2750
+++-----	-----+-	---+---++	-----	2709,2729 = 2729,2745
+++-----	-----+-	-----++	-----	2729,2737 = 2729,2755
+++-----	-----+-	-----++	-----	2701,2729 = 2705,2729 = 270504,2729 = 2728,2729 = 2729,2729
+++-----	-----	+++---+-	-----	2701,2714 = 2701,2751
+++-----	-----	---+---+-	-----	2701,2732 = 2701,2749
+++-----	-----	---+---+-	-----	2701,2738 = 2701,2750
+++-----	-----	---+---+-	-----	2701,2709 = 2701,2745
+++-----	-----	-----+-	-----	2701,2705 = 2701,270504
+++-----	+++---+-	-----++	-----	2711,2718 = 2718,2720
+++-----	+++---+-	-----++	-----	2718,2731 = 2718,2737
+++-----	+++---+-	-----++	-----	2701,2718 = 2715,2718 = 2718,2721 = 2718,2723
+++-----	+++-----	-----+-	-----	2701,2740 = 2715,2744 = 2723,2740
+++-----	---+-----	-----+-	-----	2701,2733 = 2711,2744 = 2723,2733
+++-----	-----+-	-----+-	-----	2701,2712 = 2712,2723

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+----++++	-----	-----+-	-----	2701,2726 = 2723,2726 = 2731,2744 = 2737,2744
+----++++	-----	-----+-	-----	2701,2708 = 2701,2744 = 2708,2723 = 2721,2744 = 2723,2742 = 2723,2744
+----++++	++-----	-----+-	-----	2701,2706 = 2706,2723
+----++++	+-----	-----+-	-----	2701,2720 = 2720,2723
+----++++	+-----	--++-+-	-----	2701,2725 = 2723,2725
+----++++	+-----	-----+-	-----	2701,2704 = 2704,2723
+----++++	+-----	-----+-	-----	2701,2715 = 2715,2723
+----++++	--+-----	-+---+-	-----	2701,2724 = 2723,2724
+----++++	--+-----	-----+-	-----	2701,2711 = 2711,2723
+----++++	-----	---+---	-----	2701,2736 = 2723,2736
+----++++	-----	-----+-	-----	2701,2731 = 2723,2731 = 2723,2737
+----++++	-----	-----+-	-----	2701,2721 = 2701,2723 = 2721,2723 = 2723,2723
+----+---+	+-----+-	-----++	-----	2708,2718 = 2718,2718 = 2718,2740 = 2718,2742 = 2718,2744
+----+---+	-----	-----+-	-----	2708,2744 = 2742,2744 = 2744,2744
-+++++---	-----	-----+-	-----	2702,2703 = 2703,2739
-+++++---	+-----	-----+-	-----	2702,2754 = 2739,2754
-+++++---	+-----	-----+-	-----	2702,2710 = 2710,2739
-+++++---	+-----	---+---	-----	2702,2735 = 2735,2739
-+++++---	+-----	-----+-	-----	2702,2741 = 2739,2741
-+++++---	--+-----	-----+-	-----	2702,2743 = 2739,2743
-+++++---	--+-----	-----+-	-----	2707,2753 = 2727,2753
-+++++---	--+-----	-----+-	---+---	2707,2757 = 2727,2757
-+++++---	--+-----	-----+-	-----	2702,2707 = 2702,2727 = 2707,2739 = 2727,2739
-+++++---	---+---	-----+-	-----	2702,2713 = 2713,2739
-+++++---	-----+-	-----+-	-----	2717,2753 = 2734,2753
-+++++---	-----+-	-----+-	-----	2716,2730 = 2719,2753
-+++++---	-----+-	+-----	-----	2714,2753 = 2751,2753
-+++++---	-----+-	-+-----	-----	2732,2753 = 2749,2753
-+++++---	-----+-	---+---	-----	2702,2747 = 2738,2753 = 2739,2747 = 2747,2753 = 2750,2753
-+++++---	---+---	---+---	-----	2709,2753 = 2745,2753
-+++++---	---+---	-----+-	---+---	2716,2757 = 2753,2758
-+++++---	---+---	-----+-	-----	2702,2716 = 2705,2753 = 270504,2753 = 2716,2739 = 2716,2753 = 2739,2753
-+++++---	-----+-	-----+-	---+---	2717,2757 = 2734,2757
-+++++---	-----+-	-----+-	-----	2702,2717 = 2702,2734 = 2717,2739 = 2734,2739
-+++++---	-----+	-----+-	---+---	2719,2757 = 2730,2758
-+++++---	-----+	-----+-	-----	2702,2719 = 2705,2730 = 270504,2730 = 2719,2739 = 2730,2739
-+++++---	-----	+-----	---+---	2714,2757 = 2751,2757
-+++++---	-----	+-----	-----	2702,2714 = 2702,2751 = 2714,2739 = 2739,2751
-+++++---	-----	-+-----	---+---	2732,2757 = 2749,2757
-+++++---	-----	-+-----	-----	2702,2732 = 2702,2749 = 2732,2739 = 2739,2749
-+++++---	-----	---+---	---+---	2738,2757 = 2750,2757
-+++++---	-----	---+---	-----	2702,2738 = 2702,2750 = 2738,2739 = 2739,2750
-+++++---	-----	---+---	---+---	2709,2757 = 2745,2757

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-+--++++	-----	---+--+	-----	2702,2709 = 2702,2745 = 2709,2739 = 2739,2745
-+--++++	-----	-----++	-----	2702,2755 = 2737,2739 = 2739,2755
-+--++++	-----	-----++	-----	2702,2728 = 2728,2739
-+--++++	-----	-----+	+-----	2702,2746 = 2739,2746
-+--++++	-----	-----+	-+-----	2702,2752 = 2739,2752
-+--++++	-----	-----+	--+-----	2702,2758 = 2705,2757 = 270504,2757 = 2739,2757 = 2739,2758 = 2757,2758
-+--++++	-----	-----+	---+-----	2702,2748 = 2739,2748
-+--++++	-----	-----+	-----+	2702,2759N = 2739,2759N
-+--++++	-----	-----+	-----+	2702,2756 = 2739,2756
-+--++++	-----	-----+	-----	2702,2705 = 2702,270504 = 2702,2739 = 2705,2739 = 270504,2739 = 2739,2739
-+--++++	-----	-----+	-----	2702,2712 = 2708,2753 = 2712,2753
-+--++++	-----	-----+	-----	2702,2753 = 2753,2753
-+--++++	-----	-----+	--+-----	2702,2757 = 2757,2757
--++-++	--+-----	-----+	-----	2703,2707 = 2703,2727
--++-++	-----+	-----+	-----	2703,2717 = 2703,2734
--++-++	-----	+-----+	-----	2703,2714 = 2703,2751
--++-++	-----	+-----+	-----	2703,2732 = 2703,2749
--++-++	-----	--+-----	-----	2703,2738 = 2703,2750
--++-++	-----	---+-----	-----	2703,2709 = 2703,2745
--++-++	-----	-----++	-----	2703,2737 = 2703,2755
--++-++	-----	-----+	-----	2703,2703 = 2703,2705 = 2703,270504
---+++++	+--+-----	-----+	-----	2707,2740 = 2710,2733 = 2727,2740
---+++++	+--+-----	-----+	-----	2710,2712 = 2716,2740
---+++++	+--+-----	-----+	-----	2717,2740 = 2734,2740
---+++++	+-----	+-----+	-----	2714,2740 = 2740,2751
---+++++	+-----	+-----+	-----	2732,2740 = 2740,2749
---+++++	+-----	--+-----	-----	2738,2740 = 2740,2750
---+++++	+-----	---+-----	-----	2709,2740 = 2740,2745
---+++++	+-----	-----++	-----	2710,2726 = 2740,2755
---+++++	+-----	-----+	---+-----	2708,2754 = 2740,2754
---+++++	+-----	-----+	-----	2705,2740 = 2708,2710 = 2710,2740
---+++++	--++-----	-----+	-----	2708,2743 = 2713,2733
---+++++	--++-----	-----+	-----	2707,2712 = 2712,2727 = 2716,2733
---+++++	--++-----	-----++	-----	2707,2726 = 2726,2727 = 2733,2755
---+++++	--++-----	-----+	-----	2705,2733 = 2707,2708 = 2708,2727
---+++++	-----++	-----+	-----	2712,2717 = 2712,2734
---+++++	-----+	+-----+	-----	2712,2714 = 2712,2751
---+++++	-----+	+-----+	-----	2712,2732 = 2712,2749
---+++++	-----+	--+-----	-----	2708,2747 = 2712,2738 = 2712,2747 = 2712,2750
---+++++	-----+	---+-----	-----	2709,2712 = 2712,2745
---+++++	-----+	-----++	-----	2712,2755 = 2716,2726
---+++++	-----+	-----+	-----	2705,2712 = 2708,2716 = 2712,2716
---+++++	-----+	-----++	-----	2717,2726 = 2726,2734
---+++++	-----+	-----+	-----	2708,2717 = 2708,2734
---+++++	-----	+-----+	-----	2714,2726 = 2726,2751
---+++++	-----	+-----+	-----	2708,2714 = 2708,2751
---+++++	-----	+-----+	-----	2726,2732 = 2726,2749
---+++++	-----	+-----+	-----	2708,2732 = 2708,2749
---+++++	-----	--+-----	-----	2726,2738 = 2726,2750
---+++++	-----	--+-----	-----	2708,2738 = 2708,2750
---+++++	-----	---+-----	-----	2709,2726 = 2726,2745
---+++++	-----	---+-----	-----	2708,2709 = 2708,2745

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----	+++++	-----	-----	++-	-----	2705,2726 = 2708,2755 = 2726,2755
----	+++++	+	-----	-----	-----	2725,2735 = 2725,2741
----	+++++	+	-----	-----	-----	2704,2735 = 2706,2738 = 2706,2750
----	+++++	+	-----	-----	-----	2704,2741 = 2705,2706 =
						270504,2706 = 2706,2710
----	+++++	+	-----	-----	-----	2720,2738 = 2720,2750
----	+++++	+	-----	-----	-----	2704,2707 = 2704,2727
----	+++++	+	-----	-----	-----	2711,2754 = 2720,2754
----	+++++	+	-----	-----	-----	2705,2720 = 270504,2720 =
						2710,2711 = 2710,2720 = 2715,2727
----	+++++	+	-----	-----	-----	2704,2717 = 2704,2734
----	+++++	+	-----	-----	-----	2704,2714 = 2704,2751
----	+++++	+	-----	-----	-----	2704,2732 = 2704,2749
----	+++++	+	-----	-----	-----	2705,2725 = 270504,2725 =
						2709,2725 = 2710,2725 = 2725,2745
						= 2725,2750
----	+++++	+	-----	-----	-----	2704,2738 = 2704,2750
----	+++++	+	-----	-----	-----	2704,2709 = 2704,2745
----	+++++	+	-----	-----	-----	2709,2715 = 2710,2736 = 2715,2745
----	+++++	+	-----	-----	-----	2704,2705 = 2704,270504 =
						2704,2710
----	+++++	+	-----	-----	-----	2710,2731 = 2715,2755
----	+++++	+	-----	-----	-----	2715,2754 = 2721,2754
----	+++++	+	-----	-----	-----	2705,2715 = 270504,2715 =
						2710,2715 = 2710,2721
----	+++++	+	-----	-----	-----	2705,2724 = 270504,2724 =
						2724,2749
----	+++++	+	-----	-----	-----	2707,2736 = 2711,2745 = 2727,2736
----	+++++	+	-----	-----	-----	2707,2731 = 2711,2755 = 2727,2731
----	+++++	+	-----	-----	-----	2705,2711 = 270504,2711
----	+++++	+	-----	-----	-----	2717,2736 = 2734,2736
----	+++++	+	-----	-----	-----	2717,2731 = 2731,2734
----	+++++	+	-----	-----	-----	2714,2736 = 2736,2751
----	+++++	+	-----	-----	-----	2714,2731 = 2731,2751
----	+++++	+	-----	-----	-----	2732,2736 = 2736,2749
----	+++++	+	-----	-----	-----	2731,2732 = 2731,2749
----	+++++	+	-----	-----	-----	2736,2738 = 2736,2750
----	+++++	+	-----	-----	-----	2731,2738 = 2731,2750
----	+++++	+	-----	-----	-----	2709,2731 = 2731,2745 = 2736,2755
----	+++++	+	-----	-----	-----	2705,2736 = 270504,2736 =
						2709,2736 = 2721,2745 = 2736,2745
----	+++++	+	-----	-----	-----	2705,2731 = 270504,2731 =
						2721,2755 = 2731,2755
----	+++++	+	-----	-----	-----	2705,2721 = 270504,2721
----	+++++	+	-----	-----	-----	2706,2707 = 2706,2727
----	+++++	+	-----	-----	-----	2707,2720 = 2720,2727
----	+++++	+	-----	-----	-----	2711,2743 = 2721,2743
----	+++++	+	-----	-----	-----	2707,2724 = 2724,2732
----	+++++	+	-----	-----	-----	2711,2727 = 2721,2727
----	+++++	+	-----	-----	-----	2707,2711 = 2707,2721
----	+++++	+	-----	-----	-----	2707,2742 = 2727,2742
----	+++++	+	-----	-----	-----	2717,2742 = 2734,2742
----	+++++	+	-----	-----	-----	2714,2742 = 2742,2751
----	+++++	+	-----	-----	-----	2732,2742 = 2742,2749
----	+++++	+	-----	-----	-----	2738,2742 = 2742,2750
----	+++++	+	-----	-----	-----	2709,2742 = 2742,2745
----	+++++	+	-----	-----	-----	2707,2754 = 2727,2754
----	+++++	+	-----	-----	-----	2707,2710 = 2710,2727
----	+++++	+	-----	-----	-----	2717,2754 = 2734,2754

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---+---+ +-----+--	-----+--	-----	2710,2717 = 2710,2734
---+---+ +-----	+-----+--	-----+--	2714,2754 = 2751,2754
---+---+ +-----	+-----+--	-----	2710,2714 = 2710,2751
---+---+ +-----	+-----+--	-----+--	2732,2754 = 2749,2754
---+---+ +-----	+-----+--	-----	2710,2732 = 2710,2749
---+---+ +-----	+-----+--	-----+--	2738,2754 = 2750,2754
---+---+ +-----	+-----+--	-----	2710,2738 = 2710,2750
---+---+ +-----	+-----+--	-----+--	2709,2754 = 2745,2754
---+---+ +-----	+-----+--	-----	2709,2710 = 2710,2745
---+---+ +-----	+-----+--	-----+--	2737,2754 = 2754,2755
---+---+ +-----	+-----+--	-----	2710,2737 = 2710,2755
---+---+ +-----	+-----+--	-----+--	2705,2754 = 270504,2754 =
			2710,2754 = 2754,2754
---+---+ +-----	+-----+--	-----	2705,2710 = 270504,2710 =
			2710,2710
---+---+ +-----	+-----+--	-----	2716,2735 = 2735,2747 = 2741,2747
---+---+ +-----	+-----+--	-----	2735,2737 = 2735,2755
---+---+ +-----	+-----+--	-----	2705,2735 = 270504,2735 =
			2735,2738 = 2735,2750 = 2738,2741
			= 2741,2750
---+---+ +-----	+-----+--	-----	2737,2741 = 2741,2755
---+---+ +-----	+-----+--	-----	2705,2741 = 270504,2741
---+---+ +-----	+-----+--	-----	2737,2743 = 2743,2755
---+---+ +-----	+-----+--	-----	2705,2743 = 270504,2743 =
			2707,2713 = 2713,2727 = 2713,2743
---+---+ +-----	+-----+--	-----	2707,2716 = 2716,2727
---+---+ +-----	+-----+--	-----	2707,2717 = 2717,2727
---+---+ +-----	+-----+--	-----	2707,2751 = 2727,2751
---+---+ +-----	+-----+--	-----	2707,2749 = 2727,2749
---+---+ +-----	+-----+--	-----	2707,2750 = 2727,2738 = 2727,2750
---+---+ +-----	+-----+--	-----	2707,2745 = 2727,2745
---+---+ +-----	+-----+--	-----	2707,2737 = 2707,2755 = 2727,2737
			= 2727,2755
---+---+ +-----	+-----+--	+-----	2707,2752 = 2727,2752
---+---+ +-----	+-----+--	+-----	2707,2758 = 2727,2758
---+---+ +-----	+-----+--	+-----	2707,2748 = 2727,2748
---+---+ +-----	+-----+--	+-----	2707,2759N = 2727,2759N
---+---+ +-----	+-----+--	+-----	2707,2756 = 2727,2756
---+---+ +-----	+-----+--	-----	2705,2707 = 2705,2727 =
			270504,2707 = 270504,2727
---+---+ +-----	+-----+--	-----	2713,2717 = 2713,2734
---+---+ +-----	+-----+--	-----	2713,2714 = 2713,2751
---+---+ +-----	+-----+--	-----	2713,2732 = 2713,2749
---+---+ +-----	+-----+--	-----	2713,2738 = 2713,2750
---+---+ +-----	+-----+--	-----	2709,2713 = 2713,2745
---+---+ +-----	+-----+--	-----	2713,2737 = 2713,2755
---+---+ +-----	+-----+--	-----	2705,2713 = 270504,2713 =
			2713,2713
---+---+ +-----	+-----+--	-----	2716,2717 = 2716,2734
---+---+ +-----	+-----+--	-----	2714,2716 = 2716,2751
---+---+ +-----	+-----+--	-----	2716,2732 = 2716,2749
---+---+ +-----	+-----+--	-----	2709,2747 = 2745,2747
---+---+ +-----	+-----+--	-----	2737,2747 = 2747,2755
---+---+ +-----	+-----+--	-----	2705,2747 = 270504,2747 =
			2716,2738 = 2716,2747 = 2716,2750
			= 2747,2750
---+---+ +-----	+-----+--	-----	2738,2747 = 2747,2747
---+---+ +-----	+-----+--	-----	2709,2716 = 2716,2745
---+---+ +-----	+-----+--	-----	2716,2737 = 2716,2755

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---+---+	-----+	-----+	-----	2705,2716 = 270504,2716 = 2716,2716
---+---+	-----+	+-----+	-----	2714,2717 = 2717,2751 = 2734,2751
---+---+	-----+	-+-----	-----	2717,2732 = 2717,2749 = 2734,2749
---+---+	-----+	--+-----	-----	2717,2738 = 2717,2750 = 2734,2750
---+---+	-----+	---+-----	-----	2709,2717 = 2717,2745 = 2734,2745
---+---+	-----+	-----+	-----	2717,2737 = 2717,2755 = 2734,2737 = 2734,2755
---+---+	-----+	-----+	-+-----	2717,2752 = 2734,2752
---+---+	-----+	-----+	--+-----	2717,2758 = 2734,2758
---+---+	-----+	-----+	---+-----	2717,2748 = 2734,2748
---+---+	-----+	-----+	-----+	2717,2759N = 2734,2759N
---+---+	-----+	-----+	-----+	2717,2756 = 2734,2756
---+---+	-----+	-----+	-----	2705,2717 = 2705,2734 = 270504,2717 = 270504,2734 = 2717,2717 = 2717,2734
---+---+	-----+	-----+	-----	2719,2737 = 2719,2755
---+---+	-----+	-----+	-----	2705,2719 = 270504,2719
---+---+	-----+	++-----	-----	2714,2749 = 2732,2751 = 2749,2751
---+---+	-----+	+-----+	-----	2714,2750 = 2738,2751 = 2750,2751
---+---+	-----+	+-----+	-----	2709,2751 = 2714,2745 = 2745,2751
---+---+	-----+	+-----+	-----	2714,2737 = 2714,2755 = 2737,2751 = 2751,2755
---+---+	-----+	+-----+	-+-----	2714,2752 = 2751,2752
---+---+	-----+	+-----+	--+-----	2714,2758 = 2751,2758
---+---+	-----+	+-----+	---+-----	2714,2748 = 2748,2751
---+---+	-----+	+-----+	-----+	2714,2759N = 2751,2759N
---+---+	-----+	+-----+	-----+	2714,2756 = 2751,2756
---+---+	-----+	+-----+	-----	2705,2714 = 2705,2751 = 270504,2714 = 270504,2751 = 2714,2751 = 2751,2751
---+---+	-----+	++-----	-----	2732,2750 = 2738,2749 = 2749,2750
---+---+	-----+	+-----+	-----	2709,2749 = 2732,2745 = 2745,2749
---+---+	-----+	+-----+	-----	2732,2737 = 2732,2755 = 2737,2749 = 2749,2755
---+---+	-----+	+-----+	-+-----	2732,2752 = 2749,2752
---+---+	-----+	+-----+	--+-----	2732,2758 = 2749,2758
---+---+	-----+	+-----+	---+-----	2732,2748 = 2748,2749
---+---+	-----+	+-----+	-----+	2732,2759N = 2749,2759N
---+---+	-----+	+-----+	-----+	2732,2756 = 2749,2756
---+---+	-----+	+-----+	-----	2705,2732 = 2705,2749 = 270504,2732 = 270504,2749 = 2732,2749 = 2749,2749
---+---+	-----+	--+-----	-----	2709,2738 = 2709,2750 = 2738,2745 = 2745,2750
---+---+	-----+	--+-----	-----	2737,2738 = 2737,2750 = 2738,2755 = 2750,2755
---+---+	-----+	--+-----	+-----	2738,2746 = 2746,2750
---+---+	-----+	--+-----	-+-----	2738,2752 = 2750,2752
---+---+	-----+	--+-----	---+-----	2738,2758 = 2750,2758
---+---+	-----+	--+-----	---+-----	2738,2748 = 2748,2750
---+---+	-----+	--+-----	-----+	2738,2759N = 2750,2759N
---+---+	-----+	--+-----	-----+	2738,2756 = 2750,2756
---+---+	-----+	--+-----	-----	2705,2738 = 2705,2750 = 270504,2738 = 270504,2750 = 2738,2750 = 2750,2750
---+---+	-----+	---+-----	-----	2709,2737 = 2709,2755 = 2737,2745 = 2745,2755
---+---+	-----+	---+-----	-----	2709,2728 = 2728,2745

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---+---+	-----	---+---+	-+-----	2709,2752 = 2745,2752
---+---+	-----	---+---+	---+-----	2709,2758 = 2745,2758
---+---+	-----	---+---+	---+-----	2709,2748 = 2745,2748
---+---+	-----	---+---+	-----+	2709,2759N = 2745,2759N
---+---+	-----	---+---+	-----+	2709,2756 = 2745,2756
---+---+	-----	---+---+	-----	2705,2709 = 2705,2745 =
				270504,2709 = 270504,2745 =
				2709,2745 = 2745,2745
---+---+	-----	-----++	-----	2728,2737 = 2728,2755
---+---+	-----	-----++	+-----	2737,2746 = 2746,2755
---+---+	-----	-----++	-+-----	2737,2752 = 2752,2755
---+---+	-----	-----++	---+-----	2737,2758 = 2755,2758
---+---+	-----	-----++	---+-----	2737,2748 = 2748,2755
---+---+	-----	-----++	-----+	2737,2759N = 2755,2759N
---+---+	-----	-----++	-----+	2737,2756 = 2755,2756
---+---+	-----	-----++	-----	2705,2737 = 2705,2755 =
				270504,2737 = 270504,2755 =
				2737,2755 = 2755,2755
---+---+	-----	-----++	-----	2705,2728 = 270504,2728
---+---+	-----	-----++	+-----	2705,2746 = 270504,2746
---+---+	-----	-----++	-+-----	2705,2752 = 270504,2752 =
				2752,2752
---+---+	-----	-----+	---+-----	2705,2758 = 270504,2758 =
				2758,2758
---+---+	-----	-----+	---+-----	2705,2748 = 270504,2748 =
				2748,2748
---+---+	-----	-----+	-----+	2705,2759N = 270504,2759N =
				2759N,2759N
---+---+	-----	-----+	-----+	2705,2756 = 270504,2756 =
				2756,2756
---+---+	-----	-----+	-----	2705,2705 = 2705,270504
---+---+	-++-----	---+---+	-----	2707,2735 = 2727,2735
---+---+	-++-----	-----+	-----	2707,2741 = 2727,2741
---+---+	-+-----	---+---+	-----	2735,2735 = 2735,2741
---+---+	---+-----	-----	-----	2707,2743 = 2743,2743
---+---+	---+-----	---+---+	-----	2707,2709 = 2709,2727
---+---+	---+-----	-----+	+-----	2707,2746 = 2727,2746
---+---+	---+-----	-----+	-----	2707,2727 = 2727,2727
----++++	++-----	---+---+	-----	2706,2708 = 2706,2740 = 2706,2742
----++++	++-----	-----+	-----	2708,2720 = 2711,2740 = 2720,2740
				= 2720,2742
----++++	+-----	---+---+	-----	2708,2725 = 2725,2740 = 2725,2742
----++++	+-----	---+---+	-----	2704,2708 = 2704,2740 = 2704,2742
----++++	+-----	-----+	-----	2715,2726 = 2731,2740 = 2737,2740
----++++	+-----	-----+	-----	2708,2715 = 2715,2740 = 2715,2742
				= 2721,2740
----++++	---+-----	---+---+	-----	2708,2724 = 2724,2742
----++++	---+-----	-----+	-----	2711,2726 = 2731,2733 = 2733,2737
----++++	---+-----	-----+	-----	2708,2711 = 2711,2742
----++++	---+-----	-----+	-----	2712,2731 = 2712,2737
----++++	-----	---+---+	-----	2708,2736 = 2736,2742
----++++	-----	-----+	-----	2708,2731 = 2708,2737 = 2721,2726
				= 2726,2731 = 2726,2737 =
				2731,2742
----++++	-----	-----+	-----	2708,2721 = 2721,2742
----++++	---+-----	-----	-----	2711,2733 = 2721,2733
----++++	++-----	-----++	-----	2706,2731 = 2706,2737
----++++	++-----	---+---+	-----	2704,2706 = 2706,2715
----++++	++-----	---+---+	-----	2704,2711 = 2704,2720

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----++-+	+--+-----	-----+-	-----	2720,2731 = 2720,2737
----++-+	+-----	--++++-	-----	2725,2731 = 2725,2737
----++-+	+-----	--+++-	-----	2704,2725 = 2725,2736
----++-+	+-----	--++-	-----	2715,2725 = 2721,2725 = 2725,2725
----++-+	+-----	----++-	-----	2704,2731 = 2704,2737
----++-+	+-----	----+-	-----	2704,2704 = 2704,2715 = 2704,2721
----++-+	+-----	----+-	-----	2715,2731 = 2715,2737
----++-+	+-----	-----	-----	2715,2715 = 2715,2721
----++-+	--+-----	-+--++-	-----	2724,2731 = 2724,2737
----++-+	--+-----	-----+-	-----	2711,2731 = 2711,2737
----++-+	-----	---+-	-----	2731,2736 = 2736,2737
----++-+	-----	---+-	-----	2721,2736 = 2736,2736
----++-+	-----	-----+-	-----	2721,2731 = 2721,2737 = 2731,2731
				= 2731,2737
----++-	+++-----	----+-	-----	2706,2711 = 2706,2720
----++-	++-----	----+-	-----	2706,2706 = 2706,2721
----++-	+--+-----	-----+-	-----	2711,2720 = 2720,2720 = 2720,2721
----++-	--+-----	-+--+-	-----	2711,2724 = 2721,2724 = 2724,2724
----++-	--+-----	-----	-----	2711,2711 = 2711,2721
----+++	+-----	-----+-	-----	2708,2740 = 2740,2740 = 2740,2742
----+++	--+-----	-----+-	-----	2708,2733 = 2733,2742
----+++	-----	-----+-	-----	2708,2712 = 2712,2712 = 2712,2742
----+++	-----	-----+-	-----	2708,2726 = 2726,2726 = 2726,2742
----+++	-----	-----+-	-----	2708,2708 = 2708,2742

2704 = 270401 – 270403,

2705 = 270502, 270503, 270504 to 270512

SPECIFICITY TABLE

HLA-B*27 SSP subtyping

Specificities and sizes of the PCR products of the 31 primer mixes used for HLA-B*27 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-B*27 alleles ³	Other amplified HLA Class I alleles ^{3,4}
1	390 bp	800 bp	*2701, 2718, 2723, 2729, 2744	*180101, 180103-1802, 1804-1815, 1817N-1824, 1826-1832, 1834-1845, 3542, 370101-3719, 400201-400602, 4008, 4009 [?] -4011 [?] , 401401 [?] -4015 [?] , 4018 [?] , 4020, 4021 [?] , 4022N [?] , 4024 [?] -4038 [?] , 4039, 4042 [?] , 4043, 4044 [?] -4049 [?] , 4050, 4052 [?] -4058 [?] , 4061 [?] -4065 [?] , 4067 [?] -4069 [?] , 4070, 4071 [?] , 407202 [?] , 4074 [?] -4076 [?] , 4078 [?] , 4080 [?] -4088 [?] , 4089, 4090 [?] -4093 [?] , 4094, 4095 [?] , 4096 [?] , 4097, 4098 [?] , 47010101-4705
2⁸	385 bp, 405 bp	800 bp	*2702, 2730, 2739, 2753, 2757	*4013, 4019 [?]
3⁵	120 bp	1070 bp	*2703	
4	245 bp	1070 bp	*2703, 270502-270512, 2707, 2709, 2710, 2713, 2714, 2716, 2717, 2719, 2727-2729, 2732, 2734, 2735, 2738, 2739, 2741, 2743, 2745-2752, 2754-2756, 2758, 2759N	*370101-3704, 3706-3709, 3712, 3713, 3715-3719
5	400 bp	1070 bp	*270401-270403, 2706, 2708, 2711, 2712, 2715,	*180101-1808, 1810-1815, 1817N-1824, 1826-1832, 1834-1845, 3542, 3711, 3714, 400201-400602, 4008,

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			2718, 2720, 2721, 2723- 2726, 2731, 2733, 2736, 2740, 2744	4009 [?] -4011 [?] , 401401 [?] -4015 [?] , 4018 [?] , 4020, 4021 [?] , 4022N [?] , 4024 [?] -4036 [?] , 4038 [?] , 4039, 4042 [?] -4046 [?] , 4048 [?] -4050 [?] , 4052 [?] -4058 [?] , 4061 [?] -4065 [?] , 4067 [?] -4069 [?] , 4070, 4071 [?] , 407202 [?] , 4074 [?] -4076 [?] , 4078 [?] , 4080 [?] -4088 [?] , 4089, 4090 [?] -4093 [?] , 4094, 4095 [?] , 4097, 4098 [?] , 4702, 4703, 8201, 8202
6	415 bp	800 bp	*2701-270503, 270505-2707, 2709-2711, 2713-2717, 2719-2721, 2723-2725, 2727-2732, 2734-2739, 2741, 2743, 2745-2759N	*1809, 370101-3704, 3706- 3710, 3712-3719, 4013, 4019 [?] , 4047 [?] , 4096 [?] , 47010101, 47010102, 4703- 4705
7	410 bp	1070 bp	*2708, 2712, 2718, 2726, 2733, 2740, 2742, 2744	*180101-1808, 1810-1815, 1817N-1824, 1826-1832, 1834-1845, 3542, 3705, 3711, 400201-400602, 4008, 4009 [?] -4011 [?] , 401401 [?] -4015 [?] , 4018 [?] , 4020, 4021 [?] , 4022N [?] , 4024 [?] -4038 [?] , 4039, 4042 [?] - 4046 [?] , 4048 [?] -4050 [?] , 4052 [?] - 4058 [?] , 4061 [?] -4065 [?] , 4067 [?] - 4069 [?] , 4070, 4071 [?] , 407202 [?] , 4074 [?] , 4075 [?] , 4078 [?] , 4080 [?] - 4088 [?] , 4089, 4090 [?] -4093 [?] , 4094, 4095 [?] , 4097, 4098 [?] , 4702, 8201, 8202
8⁵	95 bp	1070 bp	*2701-270512, 2708, 2710, 2712, 2713, 2715-2718, 2723, 2725, 2726, 2728, 2729, 2731, 2736-2740, 2742, 2744, 2745, 2747- 2759N	*3702, 4704, 4705
9	205 bp	1070 bp	*270401-	*9529 ^w

			270403, 2706, 2710, 2715, 2718, 2720, 2725 ^w , 2740, 2754	
10⁵	90 bp	800 bp	*2706, 2735, 2741	*9529, 1802, Cw*0705^w
11	190 bp	1070 bp	*2707, 2711, 2720, 2724, 2727, 2733, 2743	*070501-0706, 0732, 0740, 0753, 0769, 0778, 0780, 0790, 0797, 0840, 130101- 130206, 1307N-1309, 1311, 1313-1323, 1325, 1327-1330, 3531, 3588, 3947, 3950, 400101-400207, 4004, 40060101-4008, 4010-4016, 4019, 4021-4023, 4025, 4027, 4029, 4030, 4034- 4038, 4040, 4043, 4045- 4050, 4053-4058, 4061, 4062, 4064-4070, 407201- 4088, 4090, 4091, 4093- 4097, 4431, 480101, 480102, 480301-4807, 4809-4816, 4818-4820, 5110, 5116, 5131, 5134, 5181, 5182, 5208, 5509, 5522, 5524, 8101-8104N
12⁹	310 bp, 425 bp	1070 bp	*2713, 2743	
13¹⁰	215 bp, 370 bp, 400 bp	800 bp	*2712, 2716, 2747, 2753	*4075 [?]
14^{5,11}	120 bp, 345 bp	800 bp	*2717, 2734	*400207, 400602, 570302, Cw*0223
15	370 bp	1070 bp	*2718, 2729	*180101-1806, 1808-1815, 1817N-1824, 1826-1828, 1830-1832, 1834-1845, 370101-3719, 400201, 400202, 400204-400602, 4009 [?] -4011 [?] , 401401 [?] -4015 [?] , 4018 [?] , 4019 [?] , 4020, 4021 [?] , 4022N [?] , 4024 [?] -4038 [?] , 4039, 4042 [?] -4050 [?] , 4052 [?] -4058 [?] , 4062 [?] -4065 [?] , 4067 [?] , 4069 [?] , 4070, 4071 [?] , 407202 [?] , 4074 [?] , 4076 [?] , 4078 [?] , 4080 [?] -4088 [?] , 4089, 4090 [?] -4093 [?] , 4094, 4095 [?] , 4096 [?] , 4097, 4098 [?] ,

16⁶	245 bp	1070 bp	*2719, 2730	47010101-4705 *0712, 0714, 071801, 071802, 130101, 130102, 1307N, 1313, 1317, 1320- 1323, 1325, 1326, 1328, 1329, 3515, 3533, 3588, 4004, 4030, 4034, 4059, 4064, 4068, 4416, 4421, 446401, 446402, 4817, 5713, 5725, Cw*0334
17^{5,12}	100 bp, 310 bp	800 bp	*2714, 2751	*4420, 4447
18^{5,13}	95 bp, 175 bp 415 bp,	800 bp	*2724, 2732, 2749	*0728, 0814, 4031, 4045, 4080, 4454, 480101, 480102, 4804, 4806, 4807, 4809, 4811, 4815, 4816, 4818- 4820, 8101-8104N
19^{5,14}	95 bp, 240 bp	800 bp	*2725, 2735, 2738, 2747, 2750	*9529
20^{5,15}	95 bp, 175 bp, 215 bp	800 bp	*2709, 2725, 2736, 2745	*9529
21⁵	110 bp	800 bp	*270401, 270402 [?] , 270403 [?] , 2706, 2724, 2725	
22^{7,16}	165 bp, 195 bp, 375 bp	800 bp	*2726, 2731, 2737, 2755	*1843, 8201, 8202
23	235 bp	800 bp	*2701-2706, 2708-2710, 2712, 2713, 2716-2718, 2720, 2723, 2726, 2727, 2729, 2731, 2735-2737, 2739-2742, 2744-2746, 2748-2759N	*3702, 4704, 4705
24^{5,17}	105 bp, 260 bp	1070 bp	*2718, 2728, 2729	*0727, 0750, 0804, 0817, 150301-150303, 1547, 1554, 1561, 1562, 1564, 1568, 1569, 1591, 1598, 9503, 9523, 9527, 9531, 9532,

			9551, 9556, 9558, 9573, 1802, 1837, 3803, 390201, 390202, 3908, 391301, 391302, 3923, 3939, 3949, 4012, 4046, 4093, 4211, 4440, 4444, 480101-4805, 4807-4820, 5216, 5518
25⁵	85 bp	1070 bp	*2746
26⁵	105 bp	1070 bp	*2752
27¹⁸	290 bp, 320 bp	1070 bp	*2757, 2758
28⁶	325 bp	1070 bp	*2748
29⁵	70 bp	1070 bp	*2754
30⁷	385 bp	800 bp	*2759N
31	160 bp	1070 bp	*2756

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 HLA-B*27 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 lengths 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 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells.

Well number 1 contains 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*27 subtyping.

In addition, wells number 2, 6, 10, 13, 14, 17 to 23 and 30 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.

³For several HLA-B alleles 1st or 4th exon nucleotide sequences are not available. In these instances it is not known whether some of the primers of the HLA-B*27 SSP subtyping kit are completely matched with the target sequences or not. We assume that unknown sequences in the 1st or 4th exon are conserved within allelic groups.

⁴Due to the sharing of sequence motifs between HLA-B alleles non-HLA-B*27 alleles will be amplified by primer mixes 1, 2, 4 to 11, 13 to 20 and 22 to 24. In addition, the primers in vial 10 will weakly amplify the Cw*0705 allele, the Cw*0223 allele will be amplified by primer mix 14 and the Cw*0334 allele will be amplified by primer mix 16.

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

⁶Primer mixes 16 and 28 have a tendency of giving rise to nonspecific amplifications.

⁷Primer mixes 22 and 30 have tendencies to primer dimer formation.

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⁸Primer mix 2: Specific PCR product of 385 bp in the B*2739 allele. Specific PCR product of 405 bp in the B*2702, B*2730, 2753 and 2757 and the B*4013 and B*4019[?] alleles.

⁹Primer mix 12: Specific PCR product of 310 bp in the B*2743 allele. Specific PCR product of 425 bp in the B*2713 allele.

¹⁰Primer mix 13: Specific PCR product of 215 bp in the B*2747 allele. Specific PCR product of 370 bp in the B*2712 and 2716 and in the B*4075[?] allele. Specific PCR product of 400 bp in the B*2716, and B*2753 alleles.

¹¹Primer mix 14: Specific PCR product of 120 bp in the B* 2734 and in the B*400207, 400602, 570302 and the Cw*0223 alleles. Specific PCR product of 345 bp in the B*2717 allele.

¹²Primer mix 17: Specific PCR product of 100 bp in the B* *2714 and in the 4420 and 4447 alleles. Specific PCR product of 310 bp in the B*2751 allele.

¹³Primer mix 18: Specific PCR product of 95 bp in the B*2732 and B*0728, 0814 and 4454 alleles. Specific PCR product of 175 bp in the B*2724 and B*4031, 4045, 4080, 480101-480102, 4804, 4806, 4807, 4809, 4811, 4815, 4816, 4818-4820 and 8101-8104N alleles. Specific PCR product of 415 bp in the B*2749 allele.

¹⁴Primer mix 19: Specific PCR fragment of 95 bp in the B*2735 allele. Specific PCR fragment of 240 bp in the B*2725, 2738, 2747, 2750 and B*9529 alleles.

¹⁵Primer mix 20: Specific PCR fragment of 95 bp in the B*2709 allele. Specific PCR fragment of 175 bp in the B*2736 allele. . Specific PCR fragment of 215 bp in the B*2725 and 2745 and in the B*9529 allele.

¹⁶Primer mix 22: Specific PCR fragment of 165 bp in the B*2755 allele Specific PCR fragment of 195 bp in the B*2737 and in the B*1843 allele. Specific PCR fragment of 375 bp in the B*2726, 2731 and B*8201-8202 alleles.

¹⁷Primer mix 24: Specific PCR fragment of 105 bp in the B*2718 and 2729 and in the B*0727, 0750, 0804, 0817, 150301-150303, 1547, 1554, 1561, 1562, 1564, 1568, 1569, 1591, 1598, 9503, 9523, 9527, 9531, 9532, 9551, 9556, 9558, 9573, 1837, 3803, 390201, 390202, 3908, 391301, 391302, 3923, 3939, 3949, 4012, 4046, 4093, 4211, 4440, 4444, 480101-4805, 4807-4820, 5216 and 5518 alleles. Specific PCR fragment of 260 bp in the B*2728 and B*1802 alleles.

¹⁸Primer mix 27: Specific PCR fragment of 290 bp in the B*2758 allele. Specific PCR fragment of 320 bp in the B*2757 allele.

‘w’, might be weakly amplified.

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

INTERPRETATION TABLE**HLA-B*27 SSP subtyping****Amplification patterns of the B*2701 to B*2759N alleles**

	Well ⁵															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Length of spec. PCR product(s)	390	385	120	245	400	415	410	95	205	90	190	310	215	120	370	245
		405										425	370	345		
													400			
Length of int. pos. control¹	800	800	1070	1070	1070	800	1070	1070	1070	800	1070	1070	800	800	1070	1070
5'-primer(s)²	72	72	167	97	72	72	72	363	363	363	412	14	72	72	72	355
	5'-gCT*	5'-gCT*	5'-gCT*	5'-TCC*	5'-gCT*	5'-gCT*	5'-gCT*	5'-AAT*	5'-AAT*	5'-AAT*	5'-ATA*	5'-ggA*	5'-gCT*	5'-gCT*	5'-gCT*	5'-TCA*
												385	363	409		
												5'-ggT*	5'-AAT*	5'-ggC*		
3'-primer(s)³	292	287	247	301	301	317	311	418	527	409	559	272	272	248	272	559
	5'-gTA*	5'-TCA*	5'-ATg*	5'-gTC*	5'-gCT*	5'-ggA*	5'-ggT*	5'-gTC*	5'-CCT*	5'-ATA*	5'-CTC*	5'-TgC*	5'-TgC*	5'-AAA*	5'-Tgg*	5'-CTC*
	292	309			302					419		3 rd	301	486		
	5'-gTA*	5'-ATC*			5'-ggC*					5'-Cgg*		5'-TAT*	5'-gTC*	5'-gCT*		
										419			538			
										5'-CgA*			5'-gTC*			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-B allele⁴																
*2701	1					6		8								
*2702		2				6		8								
*2703			3	4		6		8								
*270401					5	6		8	9							
*270402, 270403					5	6		8	9							
*270502, 270503, 270505-270512				4		6		8								
*270504				4				8								
*2706					5	6			9	10						
*2707				4		6					11					
*2708					5		7	8								
*2709				4		6										
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

INTERPRETATION TABLE														
HLA-B*27 SSP subtyping														
Amplification patterns of the B*2701 to B*2759N alleles														
Well ⁵														
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
100	95	95	95	110	165	235	105	85	105	290	325	70	385	160
310	175	240	175		195		260			320				
	415		215		375									
800	800	800	800	800	800	800	1070	1070	1070	1070	1070	1070	800	1070
72	72	363	363	704	72	363	206	418	206	72	72	363	72	363
5'-gCT 3'	5'-gCT 3'	5'-AAT 3'	5'-AAT 3'	5'-Tgg 3'	5'-gCT 3'	5'-AAT 3'	5'-AgA 3'	5'-AgT 3'	5'-gAC 3'	5'-gCT 3'	5'-gCT 3'	5'-AAT 3'	5'-gCT 3'	5'-AAT 3'
357	363				363		363			363				
5'-Tgg 3'	5'-AgC 3'				5'-AAT 3'		5'-AAT 3'			5'-AAT 3'				
212	316	419	418	774	97	559	272	463	272	221	227	391	286	482
5'-gCT 3'	5'-gAA 3'	5'-CgA 3'	5'-gTg 3'	5'-ggT 3'	5'-gTA 3'	5'-CTC 3'	5'-Tgg 3'	5'-gCT 3'	5'-TgC 3'	5'-ACC 3'	5'-CTC 3'	5'-CCg 3'	5'-CTA 3'	5'-TgC 3'
418	418	559	499		280		583			613				
5'-gTC 3'	5'-gTC 3'	5'-CAg 3'	5'-ggA 3'		5'-CTg 3'		5'-gTg 3'			5'-gCA 3'				
	499	572	539		488									
	5'-ggA 3'	5'-gCg 3'	5'-TCC 3'		5'-CCA 3'									
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Well No.														
HLA-B allele ⁴														
						23								
						23								
						23								
				21		23								
				?		23								
						23								
						23								
				21		23								
						23								
			20			23								
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Well No.														

Lot No.: **53G**

Lot-specific Information

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Length of spec. PCR product(s)	390	385	120	245	400	415	410	95	205	90	190	310	215	120	370	245
		405										425	370	345		
													400			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*2710				4		6		8	9							
*2711					5	6					11					
*2712					5		7	8					13			
*2713				4		6		8				12				
*2714				4		6										
*2715					5	6		8	9							
*2716				4		6		8					13			
*2717				4		6		8						14		
*2718	1				5		7	8	9						15	
*2719				4		6										16
*2720					5	6			9		11					
*2721					5	6										
*2723	1				5	6		8								
*2724					5	6					11					
*2725					5	6		8	w							
*2726					5		7	8								
*2727				4		6					11					
*2728				4		6		8								
*2729	1			4		6		8							15	
*2730		2				6										16
*2731					5	6		8								
*2732				4		6										
*2733					5		7				11					
*2734				4		6								14		
*2735				4		6				10						
*2736					5	6		8								
*2737						6		8								
*2738				4		6		8								
*2739		2		4		6		8								
*2740					5		7	8	9							
*2741				4		6				10						
*2742							7	8								
*2743				4		6					11	12				
*2744	1				5		7	8								
*2745				4		6		8								
*2746				4		6										
*2747				4		6		8					13			
*2748				4		6		8								
*2749				4		6		8								
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Lot No.: **53G**

Lot-specific Information

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100	95	95	95	110	165	235	105	85	105	290	325	70	385	160	Length of spec. PCR product(s)
310	175	240	175		195		260			320					
	415		215		375										
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.
						23									*2710
															*2711
						23									*2712
						23									*2713
17															*2714
															*2715
						23									*2716
						23									*2717
						23	24								*2718
															*2719
						23									*2720
															*2721
						23									*2723
	18			21											*2724
		19	20	21											*2725
					22	23									*2726
						23									*2727
							24								*2728
						23	24								*2729
															*2730
					22	23									*2731
	18														*2732
															*2733
															*2734
		19				23									*2735
			20			23									*2736
					22	23									*2737
		19													*2738
						23									*2739
						23									*2740
						23									*2741
						23									*2742
															*2743
						23									*2744
			20			23									*2745
						23		25							*2746
		19													*2747
						23					28				*2748
	18					23									*2749
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.

Lot No.: **53G**

Lot-specific Information

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Length of spec. PCR product(s)	390	385	120	245	400	415	410	95	205	90	190	310	215	120	370	245
		405										425	370	345		
													400			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*2750				4		6		8								
*2751				4		6		8								
*2752				4		6		8								
*2753		2				6		8					13			
*2754				4		6		8	9							
*2755				4		6		8								
*2756				4		6		8								
*2757		2				6		8								
*2758				4		6		8								
*2759N				4		6		8								
*070501-0706, 0732, 0740, 0753, 0769, 0778, 0780, 0790, 0797, 0840, 130201- 130206, 1308Q, 1309, 1311, 1314- 1316, 1318, 1319, 1327, 1330, 3531, 3947, 3950, 400101-400108, 4007, 4016, 4023, 4040, 4066, 407201, 4073, 4077, 4079, 4431, 5110, 5116, 5131, 5134, 5181, 5182, 5208, 5509, 5522, 5524											11					
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Lot No.: **53G**

Lot-specific Information

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100	95	95	95	110	165	235	105	85	105	290	325	70	385	160	Length of spec.
310	175	240	175		195		260			320					PCR product(s)
	415		215		375										
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.
		19				23									*2750
17						23									*2751
						23			26						*2752
						23									*2753
						23						29			*2754
					22	23									*2755
						23								31	*2756
						23				27					*2757
						23				27					*2758
						23							30		*2759N
															*070501-0706, 0732, 0740, 0753, 0769, 0778, 0780, 0790, 0797, 0840, 130201- 130206, 1308Q, 1309, 1311, 1314- 1316, 1318, 1319, 1327, 1330, 3531, 3947, 3950, 400101-400108, 4007, 4016, 4023, 4040, 4066, 407201, 4073, 4077, 4079, 4431, 5110, 5116, 5131, 5134, 5181, 5182, 5208, 5509, 5522, 5524
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.

Lot No.: **53G**

Lot-specific Information

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Length of spec. PCR product(s)	390	385	120	245	400	415	410	95	205	90	190	310	215	120	370	245
		405										425	370	345		
													400			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*0712, 0714, 071801, 071802, 1326, 3515, 3533, 4059, 4416, 4421, 446401, 446402, 5713, 5725, <i>Cw*0334</i>																16
*0727, 0750, 0804, 0817, 150301-150303, 1547, 1554, 1561, 1562, 1564, 1568, 1569, 1591, 1598, 9503, 9523, 9527, 9531, 9532, 9551, 9556, 9558, 9573, 3803, 390201, 390202, 3908, 391301, 391302, 3923, 3939, 3949, 4211, 4440, 4444, 4802, 4808, 5216, 5518																
*0728, 0814, 4454																
*130101, 130102, 1307N, 1313, 1317, 1320- 1323, 1325, 1328, 1329, 3588											11					16
*9529									w	10						
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Lot No.: **53G**

Lot-specific Information

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100	95	95	95	110	165	235	105	85	105	290	325	70	385	160	Length of spec.
310	175	240	175		195		260			320					PCR product(s)
	415		215		375										
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.
															*0712, 0714, 071801, 071802, 1326, 3515, 3533, 4059, 4416, 4421, 446401, 446402, 5713, 5725, Cw*0334
							24								*0727, 0750, 0804, 0817, 150301-150303, 1547, 1554, 1561, 1562, 1564, 1568, 1569, 1591, 1598, 9503, 9523, 9527, 9531, 9532, 9551, 9556, 9558, 9573, 3803, 390201, 390202, 3908, 391301, 391302, 3923, 3939, 3949, 4211, 4440, 4444, 4802, 4808, 5216, 5518
	18														*0728, 0814, 4454
															*130101, 130102, 1307N, 1313, 1317, 1320- 1323, 1325, 1328, 1329, 3588
		19	20												*9529
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.

Lot No.: **53G**

Lot-specific Information

www.olerup-ssp.com

Length of spec. PCR product(s)	390	385	120	245	400	415	410	95	205	90	190	310	215	120	370	245
		405										425	370	345		
													400			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*180101, 180103- 180105, 1804- 1806, 1808, 1810- 1815, 1817N- 1824, 1826- 1828, 1830- 1832, 1834- 1836, 1838- 1842, 1844, 1845, 3711, 4003, 4005, 4020, 4039, 4089, 4702	1				5		7								15	
*180102, 1803					5		7								15	
*1802	1				5		7			10					15	
*180701, 180702, 1829, 3542	1				5		7									
*1809, 3710, 47010101, 47010102	1					6									15	
*1837	1				5		7								15	
*1843	1				5		7								15	
*370101-370107, 3703N, 3704, 3706-3709, 3712, 3713, 3715- 3719	1			4		6									15	
*3702	1			4		6		8							15	
*3705	1						7								15	
*3714, 4703	1				5	6									15	
*400201, 400202, 400204- 400206, 40060101, 40060102, 4070, 4094, 4097	1				5		7				11				15	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Lot No.: **53G**

Lot-specific Information

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100	95	95	95	110	165	235	105	85	105	290	325	70	385	160	Length of spec.
310	175	240	175		195		260			320					PCR product(s)
	415		215		375										
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.
															*180101, 180103- 180105, 1804- 1806, 1808, 1810- 1815, 1817N- 1824, 1826- 1828, 1830- 1832, 1834- 1836, 1838- 1842, 1844, 1845, 3711, 4003, 4005, 4020, 4039, 4089, 4702
															*180102, 1803
							24								*1802
															*180701, 180702, 1829, 3542
															*1809, 3710, 47010101, 47010102
							24								*1837
					22										*1843
															*370101-370107, 3703N, 3704, 3706-3709, 3712, 3713, 3715- 3719
						23									*3702
															*3705
															*3714, 4703
															*400201, 400202, 400204- 400206, 40060101, 40060102, 4070, 4094, 4097
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.

Lot No.: **53G**

Lot-specific Information

www.olerup-ssp.com

Length of spec. PCR product(s)	390	385	120	245	400	415	410	95	205	90	190	310	215	120	370	245
		405										425	370	345		
													400			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*400203, 4008	1				5		7				11					
*400207, 400602	1				5		7				11			14	15	
*4004	1				5		7				11				15	16
*4009, 4018, 4024, 4026, 4028, 4032, 4033, 4042, 4044, 4052, 4063, 4071, 4092, 4098	?				?		?								?	
*4010, 4011, 401401-4015, 4021, 4022N, 4025, 4027, 4029, 4035, 4036, 4038, 4048, 4049, 4053- 4058, 4062, 4065, 4067, 4069, 407202, 4074, 4078, 4081- 4088, 4090, 4091, 4095	?				?		?				11				?	
*4012, 480301, 480302, 4805, 4810, 4812-4814											11					
*4013		2				6					11					
*4019		?				?					11				?	
*4030, 4034, 4064	?				?		?				11				?	16
*4031	?				?		?								?	
*4037	?						?				11				?	
*4043, 4050	1				?		?				11				?	
*4045, 4080	?				?		?				11				?	
*4046, 4093	?				?		?				11				?	
*4047, 4096	?					?					11				?	
*4061	?				?		?				11					
*4068	?				?		?				11					16
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Lot No.: **53G**

Lot-specific Information

www.olerup-ssp.com

100	95	95	95	110	165	235	105	85	105	290	325	70	385	160	Length of spec.
310	175	240	175		195		260			320					PCR product(s)
	415		215		375										
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.
															*400203, 4008
															*400207, 400602
															*4004
															*4009, 4018, 4024, 4026, 4028, 4032, 4033, 4042, 4044, 4052, 4063, 4071, 4092, 4098
															*4010, 4011, 401401-4015, 4021, 4022N, 4025, 4027, 4029, 4035, 4036, 4038, 4048, 4049, 4053- 4058, 4062, 4065, 4067, 4069, 407202, 4074, 4078, 4081- 4088, 4090, 4091, 4095
							24								*4012, 480301, 480302, 4805, 4810, 4812-4814
															*4013
															*4019
															*4030, 4034, 4064
	18														*4031
															*4037
															*4043, 4050
	18														*4045, 4080
							24								*4046, 4093
															*4047, 4096
															*4061
															*4068
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.

Length of spec.	390	385	120	245	400	415	410	95	205	90	190	310	215	120	370	245
PCR product(s)		405										425	370	345		
													400			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*4075	?				?		?				11		?			
*4076	?				?						11				?	
*4420, 4447																
*4704, 4705	1					6		8							15	
*480101, 480102, 4804, 4807, 4809, 4811, 4815, 4816, 4818-4820											11					
*4806, 8101- 8104N											11					
*4817																16
*570302, Cw*0223														14		
*8201, 8202					5		7									
Cw*0705										w						
HLA-B allele ⁴																
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

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.

Well number 1 contains 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*27 subtyping.

In addition, wells number 2, 6, 10, 13, 14, 17 to 23 and 30 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.

²The nucleotide position, in the 1st, 2nd, 3rd or 4th exon, 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 or the 3rd intron, 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 sequence of the B*27051 allele has been shown to be identical to B*270502.

The sequence of the B*2722 allele has been shown to be identical to the corrected B*2706 nucleotide sequence.

⁵Primer mix 2: Specific PCR product of 385 bp in the B*2739 allele. Specific PCR product of 405 bp in the B*2702, B*2730, 2753 and 2757 and the B*4013 and B*4019⁷ alleles.

Primer mix 12: Specific PCR product of 310 bp in the B*2743 allele. Specific PCR product of 425 bp in the B*2713 allele.

Primer mix 13: Specific PCR product of 215 bp in the B*2747 allele. Specific PCR product of 370 bp in the B*2712 and 2716 and in the B*4075⁷ allele. Specific PCR product of 400 bp in the B* 2716, and B*2753 alleles.

Lot No.: **53G**

Lot-specific Information

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100	95	95	95	110	165	235	105	85	105	290	325	70	385	160	Length of spec.
310	175	240	175		195		260			320					PCR product(s)
	415		215		375										
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.
															*4075
															*4076
17															*4420, 4447
						23									*4704, 4705
	18						24								*480101, 480102, 4804, 4807, 4809, 4811, 4815, 4816, 4818-4820
	18														*4806, 8101- 8104N
							24								*4817
															*570302, Cw*0223
					22										*8201, 8202
															Cw*0705
															HLA-B allele ⁴
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Well No.

Primer mix 14: Specific PCR product of 120 bp in the B* 2734 and in the B*400207, 400602, 570302 and the Cw*0223 alleles. Specific PCR product of 345 bp in the B*2717 allele.

Primer mix 17: Specific PCR product of 100 bp in the B* *2714 and in the 4420 and 4447 alleles. Specific PCR product of 310 bp in the B*2751 allele.

Primer mix 18: Specific PCR product of 95 bp in the B*2732 and B*0728, 0814 and 4454 alleles. Specific PCR product of 175 bp in the B*2724 and B*4031, 4045, 4080, 480101-480102, 4804, 4806, 4807, 4809, 4811, 4815, 4816, 4818-4820 and 8101-8104N alleles. Specific PCR product of 415 bp in the B*2749 allele.

Primer mix 19: Specific PCR fragment of 95 bp in the B*2735 allele. Specific PCR fragment of 240 bp in the B*2725, 2738, 2747, 2750 and B*9529 alleles.

Primer mix 20: Specific PCR fragment of 95 bp in the B*2709 allele. Specific PCR fragment of 175 bp in the B*2736 allele. . Specific PCR fragment of 215 bp in the B*2725 and 2745 and in the B*9529 allele.

Primer mix 22: Specific PCR fragment of 165 bp in the B*2755 allele Specific PCR fragment of 195 bp in the B*2737 and in the B*1843 allele. Specific PCR fragment of 375 bp in the B*2726, 2731 and B*8201-8202 alleles.

Primer mix 24: Specific PCR fragment of 105 bp in the B*2718 and 2729 and in the B*0727, 0750, 0804, 0817, 150301-150303, 1547, 1554, 1561, 1562, 1564, 1568, 1569, 1591, 1598, 9503, 9523, 9527, 9531, 9532, 9551, 9556, 9558, 9573, 1837, 3803, 390201, 390202, 3908, 391301, 391302, 3923, 3939, 3949, 4012, 4046, 4093, 4211, 4440, 4444, 480101-4805, 4807-4820, 5216 and 5518 alleles. Specific PCR fragment of 260 bp in the B*2728 and B*1802 alleles.

Primer mix 27: Specific PCR fragment of 290 bp in the B*2758 allele. Specific PCR fragment of 320 bp in the B*2757 allele.

‘w’, might be weakly amplified.

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

CELL LINE VALIDATION SHEET																			
HLA-B*27 SSP subtyping kit																			
					Well														
					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
				Prod. No.:	200966117	200966118	200966119	200966120	200620521	200966122	200620523	200735224	200966125	200966126	200966127	200966128	200966129	200966130	200966131
	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	9025	DEU	*3501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*3801		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*5401		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	9051	PITOUT	*4403		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*5701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*2705		-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
14	9071	OLGA	*1501	*1520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*4001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*4002		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*0801	*5501	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CERTIFICATE OF ANALYSIS**Olerup SSP® HLA-B*27 SSP**

Product number: 101.521-24u/04u – without *Taq* pol.
Lot number: 53G
Expiry date: 2011-November-01
Number of tests: 24 test – Product No. 101.521-24u
4 tests – Product No. 101.521-04u
Number of wells per test: 31

Well specifications:

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2006-205-01	13	2009-661-13	25	2009-661-25
2	2008-511-02	14	2006-205-14	26	2009-661-26
3	2006-205-03	15	2006-205-15	27	2009-661-27
4	2006-205-04	16	2006-205-16	28	2009-661-28
5	2006-205-05	17	2009-661-17	29	2009-661-29
6	2006-205-06	18	2009-661-18	30	2009-661-30
7	2006-205-07	19	2009-661-19	31	2009-661-31
8	2006-205-08	20	2009-661-20		
9	2006-205-09	21	2006-205-21		
10	2008-511-10	22	2009-661-22		
11	2006-205-11	23	2006-205-23		
12	2008-511-12	24	2007-352-24		

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 3, 12 to 14, 17, 19, 20 and 25 to 31 were available. The specificities of the primers in primer solutions 13, 17, 19, 20, 22 and 26 were tested by separately adding one additional 5'-primer, respectively one additional 3'-primer. In primer solutions 3, 14 and 27 to 31 it was only possible to test the 5'-primers, the 3'-primers were not possible to test. In primer solution 12 it was only possible to test the 3'-primers, the 5'-primers were not possible to test. In primer solutions 2, 13, 17, 18 and 22 one of the 3'-primers was not possible to test. Additional primers in primer solutions 5, 10, 18 and 22 were tested by separately adding one additional 5'-primer and /or one additional 3'-primer.

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

Date of approval: 2010-August-30

Approved by:

Quality Control, Supervisor

Declaration of Conformity

Product name: *Olerup SSP*® HLA-B*27

Product number: 101.521-24u/04u

Lot number: 53G

Intended use: HLA-B*27 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 9001:2008 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
2010-August-30

Olle Olerup
Managing Director

Lot No.: **53G**

Lot-specific Information

www.olerup-ssp.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**.