

## Using Genes-4U ToolSets™ for LightCycler™ with Software Versions 4.0 , 4.05 and 1.2

Genes-4U ToolSets can be used for the Roche LightCycler family of instruments with the new software versions 4.0 & 4.05 for the carousel instruments and 1.2 for the microplate instrument LC 480.

Software Versions 4.0 and 4.05



Carousel Instruments

Software Version 1.2

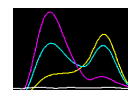


Microplate Instrument

**There is however one notable limitation** : these new software versions allow only one melting curve analysis per experiment. **This applies currently only to the combined (parallel) use of the HFE 282 and HFE 63+65 ToolSets in one run.** In this application, one common amplification is followed by two different melting curve analyses optimised for readout of the HFE 282 and HFE 63+65 melting curves. While this combined readout protocol is compatible with program version 3 series, it is not compatible with program series 4.0 & 4.05 (carousel instruments) and 1.2 (microplate instrument LC480).

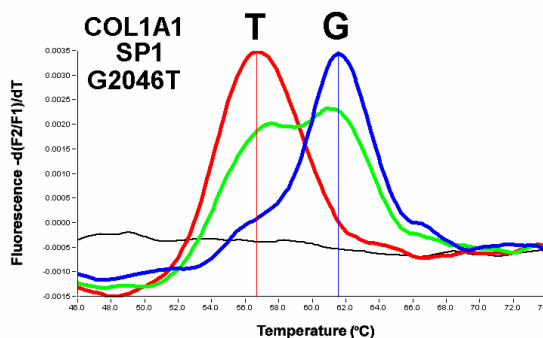
**When using program series 4.0 ,4.05 or 1.2, the second melting curve has to be omitted.**

**To obtain the second melting curve, the LightCycler has to be run with the second melting curve alone (no amplification step) in a separate program.**



### COL1A1 SP1 ToolSet™ for LightCycler™ (COL1A1 G2046T, rs1800012)

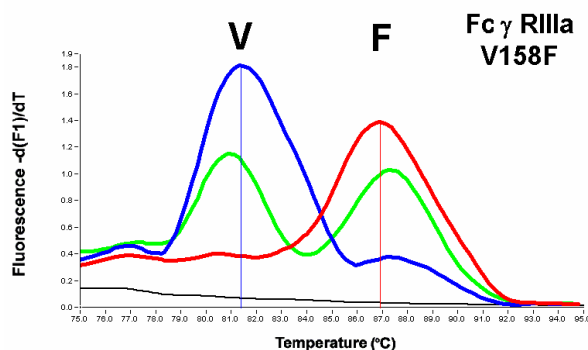
The **COL1A1 SP1** ToolSet™ for LightCycler™ allows detection of the **G→T** single nucleotide polymorphism at position 2046 in the COL1A1 gene (rs 1800012). The rarer T allele (also designated as “s” allele) has been associated with increased risk of osteoporosis and bone fracture in comparison with the G allele (also known as “S” allele). [Pubmed : 16580273, 12810179, 10025922]



Representative Melting Curve obtained with the **Genes-4U COL1A1 Sp1 ToolSet for LightCycler**

### FcγRIIIa V158F ToolSet™ for LightCycler™ (G559T)

The **FcγRIIIa V158F** ToolSet™ for LightCycler™ allows detection of the **G→T** single nucleotide polymorphism at position 559 in the FcγRIIIa gene resulting in the **Val158Phe (V158F)** exchange in the FcγRIIIa protein. The V/V genotype results in a more efficient binding of IgG1 or IgG3 to NK cells and in an increased NK cell activation by aggregated IgG as compared to the F/F genotype. **The FcγRIIIa V158F polymorphism** has shown associations to **immune-related disorders** (e.g. lupus erythematoses, rheumatoid arthritis, Wegener’s granulomatosis, adult periodontitis, HIV-related Kaposi’s sarcoma) and may influence the response to therapeutically used antibodies.



Representative Melting Curve obtained with the **Genes-4U FcγRIIIa V158F ToolSet for LightCycler**

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