

### LIPSGENE® Tyrosinase Kit

#### Intended use

The LIPSGENE® Tyrosinase Kit is intended for real-time quantification of *tyrosinase* transcripts. *Tyrosinase* (Monophenol monooxygenase, EC 1.14.18.1) catalyzes the conversion of tyrosine to melanin and is a tissue-specific activated gene of melanocytes. Detection via *tyrosinase* mRNA of circulating tumour cells and bone marrow micro metastases may predict recurrence and survival in malignant melanoma. Quantitative RT-PCR detection of *tyrosinase* mRNA in peripheral blood is potent to predict overall survival and disease-free survival and may help identifying subgroups of patients at high risk of early relapse for more aggressive adjuvant therapy.

#### Kit contents

- ✓ Lyophilized oligonucleotide mix containing *tyrosinase* cDNA specific primers and probes, PCR vessels containing stabilized synthetic *tyrosinase* standard DNA (ready-to-use reference curves), sample PCR tubes (shipped at room temperature or together with taq polymerase on dry ice).
- ✓ Taq Polymerase, 10x PCR buffer, 50 mM Mg-chloride solution, PCR grade water, 10x ROX (shipped on dry ice).
- ✓ Sufficient to run 120 tests.

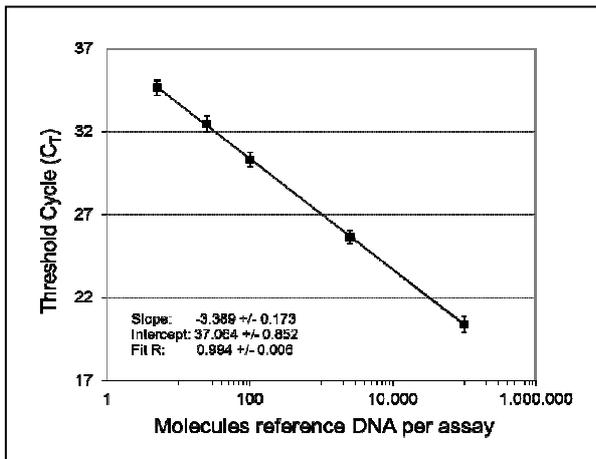
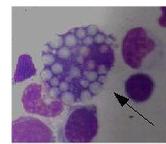
*Note: Reverse transcription reagents available with a separate kit (M-MLV Reverse Transcription Kit, Cat.no. 1050001XX-050).*

#### Performance assessment

The LIPSGENE® Tyrosinase Kit was evaluated together with cDNA obtained from the tyrosinase mRNA expressing MeWo (ATCC Number: HTB-65) and HTB, and the tyrosinase negative cell line HL-60 (ATCC Number: CCL-240).

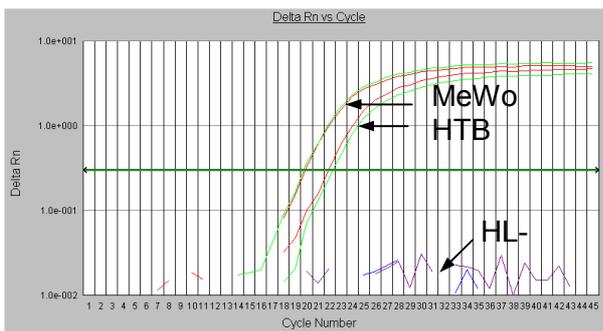
Assessment criterion	Sample type	Performance
Analytical sensitivity	Synthetic <i>tyrosinase</i> DNA	≥5 copies/run
Linear range	Synthetic <i>tyrosinase</i> DNA	>5 logs

## 2. LIPSGENE® – GENE EXPRESSION QUANTIFICATION



**Figure 2.13:** Repeatability of *tyrosinase* cDNA quantification assay. The study was performed with synthetic *tyrosinase* DNA specimen and 19 replicates for each concentration (ready-to-use *tyrosinase* DNA standards; 10<sup>5</sup>, 2.5 × 10<sup>3</sup>, 10<sup>2</sup>, 25, 5 copies per tube) on ABI PRISM SDS. The mean run data are included in the figure.

### Typical run results



**Figure 2.14:** Quantification of *tyrosinase* cDNA using an ABI PRISM SDS. Quantitative analysis of *tyrosinase* transcripts obtained from the tyrosinase RNA-positive melanoma cell lines MeWo and HTB, and the tyrosinase negative cell line HL-60. Analysis performed in duplicate. 2 µl of 1:10 diluted cDNA were analyzed using the LIPSGENE® Tyrosinase Kit.

### Ordering information

Kit version	RP	ST	LP	LC	SC	SP	RS
IvD state	RUO	RUO	RUO	-	-	-	-
120 tests	1030110RP-120	1030110ST-120	1030110LP-120	-	-	-	-

**RP** = 0.2 ml regular profile 8-well/strip PCR tubes and cap strips (e.g. ABI PRISM® 7000/7300/7700 SDS [Applied Biosystems/Life Technologies], iCycler IQ™; IQ5 [Bio-Rad], MX3000P, Mx3005P [Stratagene]; Mastercycler® ep realplex [Eppendorf]); **ST** = Single 0.2 ml PCR Tube with attached cap (e.g. Rotor-Gene™ 3000/6000, Rotor-Gene Q [Qiagen]; LineGene K [Bioer]); **LP** = 0.1 ml low profile 8-well/strip PCR tubes and cap strips (e.g. , 7500 Fast [Applied Biosystems/Life Technologies], MiniOpticon™, CFX-96 [Bio-Rad]); **LC** = 20 µl LightCycler glass capillaries (LightCycler 2.x, Roche); **SC** = 25 µl SmartCycler tubes (e.g. SmartCycler® [Cepheid]); **SP** = 20 µl DX-12 reaction tubes (Spartan Dx-12); **RS** = 0.1 ml 4-well tube/strips (Rotor-Gene™ 3000/6000, Rotor-Gene Q [Qiagen]).