

## IGF-I

### Insulin Like Growth Factor I, IGF-1 murine, recombinant, *E. coli*

Cat. No.	Amount
PR-447	50 $\mu$ g

For *in vitro* use only  
Quality guaranteed for 12 months  
Store at -20°C

#### Avoid freeze / thaw cycles

#### Form

Lyophilized. IGF-I was lyophilized after dialysis against PBS.

#### Solubility

It is recommended to reconstitute the lyophilized IGF-I in sterile bidest H<sub>2</sub>O not less than 100  $\mu$ g/ml, which can then be further diluted to other aqueous solutions. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

#### Activity

EC<sub>50</sub>: < 1.0 ng/ml, corresponding to a specific activity of 1 x 10<sup>6</sup> U/mg, calculated by the dosedependent proliferation of murine BALB\C 3T3 cells (measured by H-thymidine uptake).

#### Endotoxin

Less than 0.1 ng/ $\mu$ g (IEU/ $\mu$ g) of IGF-I.

#### Molecular Weight

8 kDa

#### Purity

≥ 95% by SDS-PAGE and RP-HPLC

#### Description

IGF is a well-characterized basic peptide believed to be secreted by the liver and to circulate in the blood. It has growth-regulating, insulin-like, and mitogenic activities. This growth factor has a major, but not absolute, dependence on Somatotropin. It is believed to be mainly active in adults in contrast to Insulin like Growth Factor II, which is a major fetal growth factor.

Recombinant murine IGF-I produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 70 amino acids and having a molecular mass of 7.6 kDa.

Recombinant IGF-I is purified by proprietary chromatographic techniques.

#### Selected References:

- Adhami *et al.* (2004) Oral consumption of green tea polyphenols inhibits insulin-like growth factor-I-induced signaling in an autochthonous mouse model of prostate cancer. *Cancer Res.* **64**:8715.
- Fabian *et al.* (2004) Inhibitory effect of IGF-I on induced apoptosis in mouse preimplantation embryos cultured *in vitro*. *Theriogenology.* **61**:745.
- Herman *et al.* (2004) Insulin-like growth factor-I governs submucosal growth and thickness in the newborn mouse ileum. *Pediatr. Res.* **55**:507.
- Kurzawa *et al.* (2002) Evaluation of mouse preimplantation embryos exposed to oxidative stress cultured with insulin-like growth factor I and II, epidermal growth factor, insulin, transferrin and selenium. *Reprod. Biol.* **2**:143.
- Wang *et al.* (2004) Development of leydig cells in the insulin-like growth factor-I (igf-I) knockout mouse: effects of igf-I replacement and gonadotropic stimulation. *Biol. Reprod.* **70**:632.
- Nahm *et al.* (2003) Insulin-like growth factor-I improves cerebellar dysfunction but does not prevent cerebellar neurodegeneration in the calcium channel mutant mouse, leaner. *Neurobiol. Dis.* **14**:157.
- Kubota *et al.* (2008) Low-dose GH supplementation reduces the TLR2 and TNF- $\alpha$  expressions in visceral fat. *Biochemical and Biophysical Research Communications* **368**:81-87.