Data sheet

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Jena Bioscience

IGF-I

Insulin Like Growth Factor I, IGF-1

human, recombinant, *E. coli*

Cat. No.	Amount
PR-446	100 µg

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 50 mM acetic acid.

Solubility
It is recommended to reconstitute the lyophilized IGF-I in sterile bidest H_2O not less than 100 µg/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_{50}: < 1.0 ng/ml, corresponding to a specific activity of 1 x 10^6 U/mg, calculated by the dosedependent proliferation of murine BALB\C 3T3 cells (measured by H-thymidine uptake). IGF-I exerts its biological activity in the concentration range of
0.2- 20 ng/ml.

Endotoxin
Less than 0.1 ng/µg (IEU/µg) 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 human IGF-I produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 70 amino acids and having a molecular mass of 7.655 kDa.
Recombinant IGF-I is purified by proprietary chromatographic techniques.

Selected References:

Bleumink *et al.* (2005) A promoter polymorphism of the insulin-like growth factor-I gene is associated with left ventricular hypertrophy. *Heart.* **91**:239.
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Sanz *et al.* (2005) Expression of insulin-like growth factor I by activated hepatic stellate cells reduces fibrogenesis and enhances regeneration after liver injury. *Gut.* **54**:134.
Phornphutkul *et al.* (2004) Insulin-like growth factor-I signaling is modified during chondrocyte differentiation. *J. Endocrinol.* **183**:477.
Veldhuis *et al.* (2004) Sustained growth hormone (GH) and insulinlike growth factor I responses to prolonged high-dose twice-daily GH-releasing hormone stimulation in middle-aged and older men. *J. Clin. Endocrinol. Metab.* **89**:6325.
Coutant *et al.* (2004) Divergent effect of endogenous and exogenous sex steroids on the insulin-like growth factor I response to growth hormone in short normal adolescents. *J. Clin. Endocrinol. Metab.* **89**:6185.