

Recombinant Mouse Insulin-Like Growth Factor 1 (rm IGF-1)

Synonyms: Somatomedin C, IGFIA

Introduction: The somatomedins, or insulin-like growth factors (IGFs), comprise a family of peptides that play important roles in mammalian growth and development. IGF-1 mediates many of the growth-promoting effects of growth hormone (GH; MIM 139250). Early studies showed that growth hormone did not directly stimulate the incorporation of sulfate into cartilage, but rather acted through a serum factor, termed 'sulfation factor', which later became known as 'somatomedin' (Daughaday et al., 1972). Three main somatomedins have been characterized: somatomedin C (IGF1), somatomedin A (IGF2; MIM 147470) and somatomedin B (MIM 193190) (Rotwein, 1986; Rosenfeld, 2003).

Description: Recombinant murine IGF-1 produced in *E.Coli* is a single, non-glycosylated, polypeptide chain containing 70 amino acids and having a molecular mass of 7.600 kDa. rm IGF-I is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilized with no additives.

The sample size of 1 µg contains Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rm IGF-1 in sterile H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rm IGF-1, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rm IGF-1 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0,1 % HSA or BSA). Please avoid freeze-thaw cycles.

Purity: Greater than 95.0% as determined by SDS-PAGE.

Amino Acid Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Gly-Pro-Glu-Thr-Leu.

Endotoxicity: The endotoxin level is less than 1 EU / µg determined by LAL method.

Biological Activity: The ED₅₀, calculated by the dose-dependant proliferation of murine BALB/C 3T3 cells (measured by 3H-thymidine uptake) is less than 1.0 ng/ml, corresponding to a specific activity of 1x10⁶ U/mg.

This material is offered for **research use only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	10 µg	Cat.N°	12343313
<i>medium</i>	50 µg	Cat.N°	12343315
<i>large</i>	250 µg	Cat.N°	12343317

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Gladiolenweg 2; 26169 Friesoythe; Germany
phone: +49-(0)4491-400997, fax: +49-(0)4491-400998, info@immunotools.com
www.immunotools.com