



Product Data Sheet

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**Cat#**            **SP-89927-100**            **Size:** 100 ug

**Description:** Human IGF-1 LR3

**Sequence:** Met-Phe-Pro-Ala-Met-Pro-Leu-Ser-Ser-Leu-Phe-Val-Asn-Gly-Pro-Arg-Thr-Leu-Cys-Gly-Ala-Glu-Leu-Val-Asp-Ala-Leu-Gln-Phe-Val-Cys-Gly-Asp-Arg-Gly-Phe-Tyr-Phe-Asn-Lys-Pro-Thr-Gly-Tyr-Gly-Ser-Ser-Ser-Arg-Arg-Ala-Pro-Gln-Thr-Gly-Ile-Val-Asp-Glu-Cys-Cys-Phe-Arg-Ser-Cys-Asp-Leu-Arg-Arg-Leu-Glu-Met-Tyr-Cys-Ala-Pro-Leu-Lys-Pro-Ala-Lys-Ser-Ala; MW: 9118.61

**Size:** 100 ug

**Purity:** >95%

**Store:** Desiccated at -20oC.

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The insulin-like growth factors, isolated from plasma, are structurally and functionally related to insulin but have a much higher growth-promoting activity. May be a physiological regulator of [1-14C]-2-deoxy-D-glucose (2DG) transport and glycogen synthesis in osteoblasts. Stimulates glucose transport in rat bone-derived osteoblastic (PyMS) cells and is effective at much lower concentrations than insulin, not only regarding glycogen and DNA synthesis but also with regard to enhancing glucose uptake. May play a role in synapse maturation.

Mature human IGF-I spans 70 amino acids has 94% identity with mouse IGF-I and exhibits cross-species activity. IGF-1 binds IGF-IR, IGF-IIR, and the insulin receptor and plays a key role in cell cycle progression, cell proliferation and tumor progression. IGF-1 expression is regulated by growth hormone. R3 IGF-1 is an 83 amino acid analog of IGF-1 comprising the complete human IGF-1 sequence with the substitution of an Arg (R) for the Glu(E) at position three, and a 13 amino acid extension peptide at the N terminus from methionyl porcine Growth Hormone. R3 IGF-1 has been produced with the purpose of increasing biological activity. R3 IGF-1 is significantly more potent than human IGF-I in vitro.

**References**

Zoidis E., (2011). Mol. Cell. Biochem. 348:33-42. Shcheglovitov A., (2013). Nature 503:267-271. Francis, G.L. (1992) J. Mol. Endocrinol. 8:213. LeRoith, D. (2007). Nat. Clin. Pract. Endocrinol. Metab. 3:302. Sandberg-Nordqvist, A.C. (1992) Brain Res. Mol. Brain Res. 12:275. Berryman, D.E. (2013) Nat. Rev. Endocrinol. 9:346. Guvakova, M.A. (2007) Int. J. Biochem. Cell Biol. 39:890.

**Related items**

SP-55254-5 Growth hormone-releasing peptide 6 (GHRP-6)  
SP-55255-1 Growth hormone-releasing peptide 2 (GHRP-2)  
SP-68078-5 [D-Lys3]- Growth hormone-releasing peptide 6 (GHRP-6)  
SP-50701-5 Hexarelin  
SP-89927-100 Insulin-like growth factor-1 (IGF-1 LR3), human (1-83)

*All peptides are for in vitro research use only.*

Please consult "Frequently asked questions" section at our website for Guidance on storage and solubility of the peptides.  
[http://www.4adi.com/commerce/info/showpage.jsp?page\\_id=1088&category\\_id=2427](http://www.4adi.com/commerce/info/showpage.jsp?page_id=1088&category_id=2427)

**SP-89927-100- Human-IGF-1 LR3**            150917V