

TECHNICAL DATA SHEET

Recombinant Human IGF-I (Carrier-free)

Catalog Number: 21-7068

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human IGF-I (Carrier-free)

DESCRIPTION

IGF-I (insulin-like growth factor 1) is a hormone similar to insulin in structure and function, and is a member of a family of proteins involved in mediating growth and development. IGF-I expression is regulated by growth hormone, is expressed in many cell and tissue types including liver, and may have autocrine, paracrine and endocrine functions. IGF-I binds to 3 receptors – IGF-I R, IGF-II R and the insulin receptor, and binding to IGF-I R promotes cell proliferation, survival, differentiation, and migration. Association with IGF binding proteins acts to extend the half-life of IGF-I and regulates receptor interaction.

MOLECULAR MASS

Recombinant human IGF-I is a globular protein containing 70 amino acids and 3 intra-molecular disulfide bonds.

AMINO ACID SEQUENCE

GPETLCGAEL VDALQFVCGD RGFYFNKPTG YGSSSRAPQ TGIVDECCFR SCDLRRL EMY CAPLKPAKSA

SOURCE

E. coli

APPLICATIONS

Bioassay

PURITY

98 %

STORAGE

-20°C

PROTEIN CONTENT

Content Verified by UV Spectroscopy and/or SDS-PAGE

ENDOTOXIN LEVEL

Endotoxin level is <0.1 ng/μg of protein (<1 EU/μg).

AUTHENTICITY

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

CROSS REACTIVITY

Bacteria, Chicken, Cow, Frog, Horse, Monkey, Mouse, Pig, Rat, Sheep, Tiger Salamander

BIOACTIVITY

The ED₅₀ was determined by a cell proliferation assay using FDC-P1 cells is ≤ 2.0 ng/ml, corresponding to a specific activity of ≥ 5 x 10⁵ units/mg.

RESEARCH AREAS

Angiogenesis/Cardiovascular; Bone, Skeletal, Cartilage; Diabetes / Weight Regulation; Wound Healing; Inflammation; Proliferation

RECONSTITUTION

See Certificate of Analysis (COA) for lot specific reconstitution information.

REFERENCES

LeRoith D and Yakar S. 2007. Nat Clin Pract Endocrinol Metab. 3(3): 302-310. Denley A, Cosgrove LJ, Booker GW, Wallace JC and Forbes BE. 2005. Cytokine Growth Factor Rev. 16(4-5): 421-439. Mohan S and Baylink DJ. 2002. J Endocrinol. 175(1): 19-31. Takahashi Y. 2012. Endocr J. 59(11): 955-962. Nissley SP and Rechler MM. 1984. 13(1): 43-67. Agrogiannis GD, Sifakis S, Patsouris ES and Konstantinidou AE. 2014. Mol Med Rep. 10(2): 579-584.

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