

TECHNICAL DATA SHEET

Recombinant Human Heregulin beta-1 (Carrier-free)

Catalog Number: 21-7062

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human Heregulin beta-1 (Carrier-free)

DESCRIPTION

Heregulin-1/Neuregulin (HRG1/NRG1) is one of four members of the Heregulin/Neuregulin family of cytokine growth factors that play important roles during development of the nervous system and the heart. A shared EGF-like domain interacts with ErbB3 and ErbB4 members of the ErbB family of receptors. Alternative splicing in the EGF-like domain of NRG1 results in α and beta isoforms. Heregulin beta-1 is a secreted protein that acts to modulate cell growth and differentiation. The HRG1-beta isoform displays neuroprotective properties and participates in development, survival, and metabolism in neuron and glial cells.

MOLECULAR MASS

Recombinant human Heregulin beta-1 (HRG1-beta1) is a 7.5 kDa polypeptide consisting of only the EGF domain of Heregulin beta-1 (65 amino acid residues).

AMINO ACID SEQUENCE

SHLVKCAEKE KTFCVNGGEC FMVKDLSNPS RYLCKCPNEF TGDRQCNYVM ASFYKHLGIE FMEAE

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

Rat

BIOACTIVITY

The ED₅₀ was determined by the dose-dependent stimulation of the proliferation of human MCF-7 cells is ≤ 0.5 ng/ml, corresponding to a specific activity of ≥ 2 x 10⁶ units/mg.

RESEARCH AREAS

Angiogenesis/Cardiovascular; Apoptosis; Cancer; Proliferation; Stem Cells & Differentiation

RECONSTITUTION

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

REFERENCES

Buonanno A and Fischbach GD. 2001. *Curr Opin Neurobiol.* 11(3): 287-296. Garratt AN, Britsch S and Birchmeier C. 2000. *Bioessays.* 22(11): 987-996. Holmes WE, Sliwkowski MX, Akita RW, Henzel WJ, Lee J, Park JW, Yansura D, Abadi N, Raab H, Lewis GD et al. 1992. *Science.* 256(5060): 1205-1210. Shamier A and Buonanno A. 2010. *J Neurochem.* 113(5): 1163-1176. Mei L and Xiong WC. 2008. *Nat Rev Neurosci.* 9(6): 437-452. Carraway KL III, Soltoff SP, Diamonti AJ and Cantley LC. 1995. *J Biol Chem.* 270(13): 7111-7116. Garratt AN, Britsch S and Birchmeier C. 2000. *Bioessays.* 22(11): 987-996.

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