

TECHNICAL DATA SHEET

Recombinant Human Gremlin-1 (Carrier-free)

Catalog Number: 21-7060

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

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Recombinant Human Gremlin-1 (Carrier-free)

DESCRIPTION

Gremlin-1 is a member of the Dan family of secreted glycoproteins. As an antagonist of BMP (binds to BMP-2, BMP-4 and BMP-7), Gremlin-1 may play a role in regulating organogenesis, body patterning, and tissue differentiation and can act as an inhibitor of monocyte chemotaxis. It is expressed at various levels in the small intestine, fetal brain, colon, ovary, prostate, pancreas and skeletal muscle. There are two isoforms for human Gremlin - isoform 1 is the standard protein, and isoform 2 has a 40 amino acid deletion in the N-terminal region. As is typical of members of the TGF-beta superfamily, this protein also contains a cysteine knot motif.

MOLECULAR MASS

Recombinant Gremlin-1 is a 18.3 kDa protein containing 160 amino acid residues.

AMINO ACID SEQUENCE

KKKGSQGAIP PPDKAQHNS EQTQSPQQPG SRNRGRGQGR GTAMPGEEVL ESSQEALHVT ERKYLKRDWC KTQPLKQTIH
EEGCNSRTII NRFCYGQCNS FYIPRHIRKE EGSFQSCSFC KPKKFTTMMV TLNCPQLQPP TKKKRVTRVK QCRCISIDLD

SOURCE

CHO cells

APPLICATIONS

Bioassay

PURITY

90 %

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

BIOACTIVITY

Determined by its ability to inhibit BMP-4 induced alkaline phosphatase production by ATDC-5 chondrogenic cells. The ED₅₀ for this effect is 0.07-0.11 μg/ml.

RESEARCH AREAS

Bone, Skeletal, Cartilage; Cancer; Stem Cells & Differentiation

RECONSTITUTION

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

REFERENCES

McMahon R, Murphy M, Clarkson M, Taal M, Mackenzie HS, Godson C, Martin F and Brady HR. 2000. J Biol Chem. 275(14): 9901-9904. Chen B, Blair DG, Plisov S, Vasiliev G, Perantoni AO, Chen Q, Athanasiou M, Wu JY, Oppenheim JJ and Yang D. 2004. J Immunol. 173(10): 5914-5917. Wordinger RJ, Zode G and Clark AF. 2008. Exp Eye Res. 87(2): 78-79. Hsu DR, Economides AN, Wang X, Eimon PM and Harland RM. 1998. Mol Cell. 1(5): 673-683. Topol LZ, Modi WS, Koochekpour S and Blair DG. 2000. Cytogenet Cell Genet. 89: 79-84.

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