

TECHNICAL DATA SHEET

Recombinant Human Noggin (Carrier-free)

Catalog Number: 21-7075

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human Noggin (Carrier-free)

DESCRIPTION

Noggin is a highly conserved molecule and is a secreted protein that drives neural formation and dorsalization during embryonic development. It is also a BMP antagonist, binding BMP-4 as well as BMP-2 and BMP-7, to prevent them from associating with their receptors. Noggin is expressed in defined areas of the adult central nervous system and in various peripheral tissues such as lung, skeletal muscle, and skin.

MOLECULAR MASS

Recombinant human Noggin is a 46 kDa disulfide-linked homodimer (120-10C) consisting of two 206 amino acid polypeptide chains. Monomeric glycosylated Noggin migrates at an apparent molecular weight of approximately 28.0-33.0 kDa by SDS PAGE analysis under reducing conditions.

AMINO ACID SEQUENCE

QHYLEHIRPAP SDNLPLVDLI EHPDPIFDPK EKDLNETLLR SLLGGHYDPG FMATSPPEDR PGGGGGAAGG AEDLAELDQL
LRQRPSGAMP SEIKGLEFSE GLAQGKKQRL SKKLRRKLQM WLWSQTFPCPV LYAWNDLGSF FWPRYVKVGS CFSKRSCSVP
EGMVCKPSKS VHLTVLRWRC QRRGGQRCGW IPIQYPIISE CKCSC

SOURCE

HEK293 cells

APPLICATIONS

Bioassay

PURITY

95 %

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

Chicken, Mouse

BIOACTIVITY

Determined by its ability to inhibit 5.0 ng/ml of BMP-4 induced alkaline phosphatase production by ATDC chondrogenic cells. The expected ED₅₀ for this effect is 2.0-3.0 ng/ml of Noggin.

RESEARCH AREAS

Bone, Skeletal, Cartilage; Stem Cells & Differentiation

RECONSTITUTION

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

REFERENCES

Valenzuela DM, Economides AN, Rojas E, Lamb TM, Nunez L, Jones P, Lp NY, Espinoza R 3rd, Brannan CI and Gilbert DJ. 1995. J Neurosci. 15(9): 6077-6084. McMahon JA, Takada S, Zimmerman LB, Fan CM, Harland RM and McMahon AP. 1998. Genes Dev. 12(10): 1438-1452. Krause C, Guzman A and Knaus P. 2011. Int J Biochem Cell Biol. 43(4): 478-481. Pregizer SK and Mortlock DP. 2014. J Bone Miner Res. DOI: 10.1002/jbmr.2313

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