

TECHNICAL DATA SHEET

Recombinant Human Sonic Hedgehog (Carrier-free)

Catalog Number: 21-8679

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human Sonic Hedgehog (Carrier-free)

DESCRIPTION

Sonic Hedgehog (Shh) is one of three highly conserved proteins that share the same signaling pathway and make up the Hedgehog family. Sonic Hedgehog is expressed in key embryonic tissues, is involved in regulating the patterning of the developing nervous system, somite and limb, and also plays an important role in the development of certain tissues like hair, tooth and bone. It interacts with the Patched and Smoothed transmembrane receptors.

MOLECULAR MASS

Recombinant E. coli-derived Human Sonic Hedgehog is a 20.0 kDa protein consisting of 176 amino acid residues, including an N-terminal Ile-Val-Ile sequence substituted for the naturally occurring, chemically modified, Cys residue.

AMINO ACID SEQUENCE

IVIGPGRGFG KRRHPKLLTP LAYKQFIPNV AEKTLGASGR YEGKISRNS RFKELTPNYN PDIIFKDEEN TGADRLMTQR CKDKLNLALAI SVMNQWPGVK LRVTEGWDED GHHSEESLHY EGRALDITTS DRDRSKYGML ARLAVEAGFD WVYYESKAHI HCSVKAENSV AAKSGG

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

Mouse

BIOACTIVITY

Determined by its ability to induce alkaline phosphatase production by C3H/10T1/2 (CCL-226) cells. The expected ED₅₀ for this effect is 0.8-1.0 μg/ml.

RESEARCH AREAS

Apoptosis; Bone, Skeletal, Cartilage; Immune System; Stem Cells & Differentiation

RECONSTITUTION

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

REFERENCES

Choudhry Z, Rikani AA, Choudry AM, Tariq S, Zakaria F, Asghar MW, Sarfraz MK, Haider K, Shafiq AA and Mobassarh NJ. 2014. Ann Neurosci. 21(1): 28-31. Patten I and Placzek M. 2000. Cell Mol Life Sci. 57(12): 1695-1708. Carpenter D, Stone DM, Brush J, Ryan A, Armanini M, Frantz G, Rosenthal A and de Sauvage F.J. 1998. Proc Natl Acad Sci USA. 95(23): 13630-13634. Johnson RL and Tabin C. 1995. Cell. 81(3): 313-316.

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