

TECHNICAL DATA SHEET

Recombinant Mouse WNT-3a (Carrier-free)

Catalog Number: 21-7093

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Mouse WNT-3a (Carrier-free)

DESCRIPTION

Wnt-3a is a secreted member of the Wingless-type MMTV integration site (Wnt) family of signaling molecules that play a role in patterning, cell-cell communication and cell fate. Wnt proteins can signal through the Frizzled family of receptors and co-receptors LRP5/6 (low-density lipoprotein-related receptor proteins 5 and 6), termed the Wnt canonical pathway. Wnt-3a is expressed primarily along the dorsal midline across overlapping regions of the Central Nervous System (CNS). Wnt-3a is involved in somite and tailbud formation in the mouse embryo, can act as a stem cell growth factor, and is essential for embryonic patterning, cell determination, cell proliferation, CNS development, and cytoskeletal formation.

MOLECULAR MASS

Recombinant murine Wnt-3a is a monomeric glycoprotein containing 334 amino acid residues. Due to glycosylation, the murine Wnt-3a migrates at an apparent molecular weight of approximately 38.0-41.0 kDa by SDS-PAGE analysis under non-reducing conditions.

AMINO ACID SEQUENCE

SYPIWWSLAV GPQYSSLSTQ PILCASIPGL VPKQLRFCRN YVEIMPSVAE GVKAGIQECQ HQFRGRRWNC TTVSNSLAIF
 GPVLDKATRE SAFVHAIASA GVAFAVTRSC AEGSAAICGC SSRLQGSPGE GWKWGGCSED IEFGGMVSRE FADARENRPD
 ARSAMNRHNN EAGRQAIASH MHLKCKCHGL SGSCEVKTCW WSQPDFRTIG DFLKDKYDSA SEMVVEKHRE SRGWVETLRP
 RYTYFKVPTE RDLVYYEASP NFCEPNPETG SFGTRDRTCN VSSHGIDGCD LLCCGRGHNA RTERRREKCH CVFHWCCYVS
 CQECTRYVDV HTCK

SOURCE

Cell Culture

APPLICATIONS

Bioassay

PURITY

75 %

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

The ED₅₀ was determined by its ability to induced alkaline phosphatase production by CCL-226 cells. The expected ED₅₀ for this effect is 0.4-0.6 ng/ml.

RESEARCH AREAS

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

RECONSTITUTION

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

REFERENCES

Willert K, Brown JD, Danenberg E, Duncan AW, Weissman IL, Reya T, Yates JR III and Nusse R. 2003. Nature. 423(6938): 448-452. Yu J and Virshup DM. 2014. Biosci Rep. 35(5):art:e00142.doi:10.1042/BSR20140119. Marikawa Y. 2006. Semin Cell Dev Biol. 17(2): 175-184. Dunty WC Jr, Biris KK,

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