



Recombinant Mouse Wnt-3A

20150227BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

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|------------------|----------------------------|
| Cat.-no.: | M10-231S |
| Size: | 2 µg |
| Lot. No.: | According to product label |

Scientific Background

| | |
|------------------------|-------------------|
| Gene-ID (NCBI): | 22416 |
| Synonyms: | Wnt3a; vt; Wnt-3a |

Wnt-3a belongs to the Wnt family of signaling proteins that play a key role in maintaining the integrity of embryonic and adult tissues. Expression of Wnt-3a occurs primarily along the dorsal midline across overlapping regions of the Central Nervous System (CNS). Wnt-3a signaling is essential for various morphogenetic events including embryonic patterning, cell determination, cell proliferation, CNS development, and cytoskeletal formation. Like other members of this family, Wnt-3a contains a highly conserved lipid modified cysteine rich domain that is essential for cell signaling. During a biochemical process called the canonical Wnt pathway; Wnt family members bind to and activate seven-pass transmembrane receptors of the Frizzled family ultimately leading to the disruption of β -Catenin degradation. Intracellular accumulation of β -Catenin increases translocation of the protein into the nucleus where it binds to TCF/LEF transcription factors to promote gene expression. Lack of Wnt signaling disrupts transcriptional activation of tumor suppressor genes and has shown to result in neoplastic transformation, oncogenesis, and human degenerative diseases. Recombinant murine Wnt-3a is a monomeric glycoprotein containing 334 amino acid residues.

Sequence

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SYPIWWSLAV GPQYSSLSLSTQ PILCASIPGL VPKQLRFCRN  
YVEIMPSVAE GVKAGIQEQC HQFRGRRWNC TTVSNSLAIF  
GPVLDKATRE SAFVHAIASA GVAFAVTRSC AEGSAAICGC  
SSRLQGSPE GWKWGGCSED IEFGGMVSRE FADARENRPD  
ARSAMNRHNN EAGRQAIASH MHLKCKCHGL SGSCVEKTCW  
WSQPDFRTIG DFLKDKYDSA SEMVVEKHRE SRGWVETLRP  
RYTYFKVPT E RDLVYYEASP NFCEPNPETG SFGTRDRTC  
VSSHGIDGCD LLCCGRGHNA RTERRREKCH CVFHWCCYVS  
CQECTRVYDV HTCK
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Database References

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|------------------------|-----------|
| Protein RefSeq: | NP_033548 |
| Uniprot ID: | P27467 |
| mRNA RefSeq: | NM_009522 |

Product Specifications

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|------------------------|------------------------------------|
| Expressed in | Cell culture |
| Purity | > 75% by SDS-PAGE & HPLC analysis |
| Endotoxin level | < 0.1 ng /µg of protein (<1EU/µg). |
| Formulation | lyophilized |
| Length (aa): | 334 |
| MW: | 38-41 kDa |

Biological Activity: 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.



AVOID REPEATED FREEZE AND THAW CYCLES!