

Recombinant Mouse Wingless-related MMTV Integration Site 3A

Cat. No. Wnt3a-1788M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	A DNA sequence encoding the signal peptide from human CD33, Met 1 - Ala 16, joined with the mature mouse Wnt-3A, Ser 19 - Lys 352 was inserted into a suitable mammalian expression vector and expressed in <i>CHO</i> cells.
Species	Mouse
Source	CHO
Protein Length	19-352 a.a.
Description	Wingless-type MMTV integration site family, member 3A, also known as WNT3A is an intercellular signaling molecule. WNT3A is expressed extensively in cells fated to give rise to embryonic mesoderm. Wnt-3a regulates survival, expansion, and maintenance of neural progenitors derived from embryonic stem cells. It has been reported that Wnt-3a supports self-renewal of embryonic stem cells and can maintain these cells in a pluripotent state. Wnt-3a is also considered a ligand that activates the beta-catenin-dependent pathway in Wnt signaling, which is implicated in numerous physiological events such as morphogenesis.
Molecular Weight	The predicted molecular weight of Recombinant Mouse WNT-3a is Mr 37 kDa. However, because of glycosylation the actual molecular weight as observed by migration on SDS Page is Mr 41 kDa.
State Of Matter	Lyophilized.

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Purity	>75% as determined by SDS-PAGE and visualized by silver stain.
Endotoxin	<1.0 EU/g as determined by the LAL method.
Biological Activity	The biological activity of Mouse WNT-3a was determined by its ability to synergize with BMP-2 to induce alkaline phosphatase synthesis by MC3T3E1 osteoblastic cells. The expected ED50 is typically 2 - 10 ng/mL, in the presence of a low or non-inducing amount of recombinant human BMP-2 (5 - 15 ng/mL). Approximately 50 - 100 ng/mL results in maximal synergy with BMP-2 activity.
Storage And Stability	This lyophilized protein is stable for six to twelve months when stored desiccated at -20°C to -70°C. After aseptic reconstitution, this protein may be stored at 2°C to 8°C for one month or at -20°C to -70°C in a manual defrost freezer. Avoid Repeated Freeze Thaw Cycles. See Product Insert for exact lot specific storage instructions.

GENE INFORMATION

Gene Name	Wnt3a wingless-related MMTV integration site 3A [<i>Mus musculus</i>]
Synonyms	Wnt3a; wingless-related MMTV integration site 3A; vt; Wnt-3a; vestigial tail; OTTMUSP00000005961
Gene ID	22416
mRNA Refseq	NM_009522
Protein Refseq	NP_033548
UniProt ID	P27467
Chromosome	11 32.0 cM

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Location	
Pathway	Basal cell carcinoma; Hedgehog signaling pathway; Melanogenesis; Pathways in cancer; Wnt signaling pathway
Function	receptor binding; protein binding; signal transducer activity

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