



Recombinant Human Wnt-3a Protein Fragment 223-352 (rhWnt3AEF6)

Catalog #109-03AEF6

Product Description

Wnt3a is one of 19 vertebrate members of the highly conserved Wingless-type MMTV integration site (Wnt) family. It is secreted cysteine-rich glycoproteins and critical for embryonic development and adult tissue homeostasis. Wnt3a functions as a key ligand in the canonical Wnt signaling pathway, binding Frizzled receptors in conjunction with LRP5/6 co-receptors, leading to the stabilization of cytoplasmic β -catenin. Stabilized β -catenin translocate to the nucleus, where it associates with TCF/LEF transcription factors to regulate expression of Wnt target genes. Wnt3a plays a pivotal role in embryonic mesoderm development, caudal somite patterning, neural tube morphogenesis, and the self-renewal of stem cells in the intestinal crypt. It also supports the maintenance of various stem cell populations, including hematopoietic, neural, and embryonic stem cells. This product is a recombinant peptide corresponding to human Wnt3a protein fragment (AA 223-352, indicated with underlining), fused with a tag to facilitate expression and purification. This region is located within the mid-to-C-terminal domain of Wnt3a and contains conserved amino acid residues that may contribute to protein folding and biological activity.

Specifications and Quality Control

Synonyms:	Wnt-3a, Wingless-type MMTV integration site family member 3A
AA Sequence:	MSDKIIHLTD DSFDTDVLKA DGAILVDFWA EWCGPCKMIA PILDEIADEY QGKLTVAKLN IDQNPGTAPK YGIRGIPTLL LFKNGEVAAT KVGALSKGQL KEFLDANLAG SGSGHMHFFFH HHSSGLVPRG SGMKETAAAK FERQHMDSPD LGTDDDDKAM GSSHHHHHHS SGLVPRGSHM ASMSDSEVNQ EAKPEVKPEV KPETHINLKV SDGSSEIFFK IKKTTPLRRL MEAFKRQGK EMDSLRFLYD GIRIQADQTP EDLDMEDNDI IEAHREQIGG <u>SDFRAIGDFL KDKYDSASEM</u> <u>VVEKHRESRG WVETLRPRYT YFKVPTERDL</u> <u>VYYEASPNFC EPNPETGSFG TRDRTCNVSS</u> <u>HGIDGCDLLC CGRGHNARAE RRREKCRCVF</u> <u>HWCCYVSCQE CTRVYDVHTC K</u>
Source:	<i>E. coli</i>

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Molecular Weight:	46.1 kDa, non-glycosylated polypeptide chains containing 411 amino acids
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Quality Control

Purity	> 90%
Physical Appearance:	White lyophilized powder.
Endotoxin:	<0.1 ng/μg of protein (<1 EU/μg)

Formulation

Lyophilized from a 0.2 μm filtered concentrated solution in 1x PBS.

Reconstitution

Reconstitute in sterile distilled water or 1x PBS to a concentration of 0.1-1.0 mg/mL.

Shipping and Storage

Gel pack. Upon receipt, store at -20°C after receiving. Upon reconstitution, store at 2-8°C for up to one week. For maximal stability, aliquot and store at -20°C. Avoid repeated freeze/ thaw cycles.

Usage

rhWnt3AEF6 is for research use only. It is not approved for human or animal use, or for application in clinical or *in vitro* diagnostic procedures.