



Recombinant Human Wnt-3a Protein, *E. coli* Derived (rhWnt3AE)

Catalog #109-03AE

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 Recombinant Human Wnt3a is expressed in *E. coli*, engineered with an N-terminal His-tag for ease of purification and detection. It is ideal for use in developmental biology research, and Wnt signaling studies.

Specifications and Quality Control

Synonyms:	Wnt-3a, Wingless-type MMTV integration site family member 3A
AA Sequence:	MGSSHHHHHH SSGLVPRGSH MYPIWWSLAV GPQYSSLGSQ PILCASIPGL VPKQLRFCRN YVEIMPSVAE GIKIGIQECQ HQFRGRRWNC TTVHDSLAIF GPVLDKATRE SAFVHAIASA GVAFAVTRSC AEGTAAICGC SSRHQGSPGK GWKWGGCSED IEFGGMVSRE FADARENRPD ARSAMNRHNN EAGRQAIASH MHLKCKCHGL SGSCEVKTCW WSQPDFRAIG DFLKDKYDSA SEMVVEKHRE SRGWVETLRP RYTYFKVPTE RDLVYYEASP NFCEPNPETG SFGTRDRTCN VSSHGIDGCD LLCCGRGHNA RAERRREKCR CVFHWCCYVS CQECTRVYDV HTCK
Source:	<i>E. coli</i>
Molecular Weight:	40.1 kDa, non-glycosylated polypeptide chains containing 352 amino acids

Rev. 0

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 (1mg/ml) solution in 40 mM HCl.

Reconstitution

Reconstitute in sterile distilled water or 20 mM HCl 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

rhWnt3AE is for research use only. It is not approved for human or animal use, or for application in clinical or *in vitro* diagnostic procedures.