Wnt3a Protein, Human (His)

Cat. No.:	HY-P70453A
Synonyms:	MGC119418; MGC119419; MGC119420; protein Wnt-3a; wingless-type MMTV integration site family, member 3A; Wnt3a; Wnt-3a
Species:	Human
Source:	E. coli
Accession:	P56704 (S19-C351)
Gene ID:	89780
Molecular Weight:	Approximately 40 kDa

PROPERTIES

AA Sequence	S Y P I W W S L A V G P Q Y S S L G S Q P I L C A S I P G L V P K Q L R F C R N Y V E I M P S V A E G I K I G I Q E C Q H Q F R G R R W N C T T V H D S L A I F G P V L D K A T R E S A F V H A I A S A G V A F A V T R S C A E G T A A I C G C S S R H Q G S P G K G W K W G G C S E D I E F G G M V S R E F A D A R E N R P D A R S A M N R H N N E A G R Q A I A S H M H L K C K C H G L S G S C E V K T C W W S Q P D F R A I G D F L K D K Y D S A S E M V V E K H R E S R G W V E T L R P R Y T Y F K V P T E R D L V Y Y E A S P N F C E P N P E T G S F G T R D R T C N V S S H G I D G C D L L C C G R G H N A R A E R R R E K C R C V F H W C C Y V S C Q E C T R V Y D V H T C
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of 10 mM Tris-HCl, 1 mM EDTA, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The Wnt3a protein serves as a ligand for members of the frizzled family of seven transmembrane receptors, likely functioning in the canonical Wnt signaling pathway, resulting in the activation of transcription factors of the TCF/LEF family. It is essential for normal embryonic mesoderm development, caudal somite formation, and morphogenesis of the developing neural tube. Wnt3a also plays a role in mediating the self-renewal of stem cells at the base of intestinal crypts in

vitro. The protein forms a soluble 1:1 complex with AFM, preventing oligomerization and ensuring prolonged biological activity; this complex may represent the physiological form in body fluids. Wnt3a forms homooligomers through disulfide linkages, which lead to inactivation. It interacts with PORCN and components of the Wnt-Fzd-LRP5-LRP6 signaling complex, including LRP6, APCDD1, and WLS. Additionally, Wnt3a interacts with glypican GPC3 and PKD1 via its extracellular domain. These interactions underscore the complexity of Wnt3a's involvement in various developmental and signaling processes.

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