

Product Data Sheet

HOXA1 Protein, Human (His)

Cat. No.:	HY-P74879
Synonyms:	Homeobox protein Hox-A1; HOXA1; HOX1F
Species:	Human
Source:	E. coli
Accession:	P49639 (M1-H335)
Gene ID:	3198
Molecular Weight:	Approximately 42 kDa

PROPERTIES	
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM Tris, 30% Glycerol, pH 7.5. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 $\mu\text{g}/\text{mL}$ 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	HOXA1 protein functions as a sequence-specific transcription factor, intricately regulating diverse developmental processes encompassing the brainstem, inner and outer ear, abducens nerve, and cardiovascular development. Additionally, it plays a pivotal role in cognitive and behavioral processes. Integral to a developmental regulatory system that imparts specific positional identities along the anterior-posterior axis, HOXA1 primarily influences anterior body structures and contributes to the maintenance or generation of hindbrain segments. Its transcriptional activation is contingent upon the presence of PBX1A and PKNOX1. In the nucleus, HOXA1 interacts with OGT via the TPR repeats domain. Furthermore, it forms a DNA- binding heterodimer with the transcription factor PBX1, highlighting its multifaceted role in orchestrating intricate developmental programs.

Caution: Product has not been fully validated for medical applications. For research use only.

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