Profilin-4 Protein, Human (His)

Cat. No.:	HY-P73697
Synonyms:	Profilin-4; Profilin IV; PFN4
Species:	Human
Source:	E. coli
Accession:	Q8NHR9 (M1-S129)
Gene ID:	375189
Molecular Weight:	Approximately 14 kDa

PROPERTIES

AA Sequence	M S H L Q S L L L D T L L G T K H V D S A A L I K I Q E R S L C V A S P G F N V T P S D V R T L V N G F A K N P L Q A R R E G L Y F K G K D Y R C V R A D E Y S L Y A K N E N T G V V V V K T H L Y L L V A T Y T E G M Y P S I C V E A T E S L G D Y L R K K G S
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, pH 7.4.
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. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	Profilin-4 protein plays a crucial role in male fertility, being essential for manchette development and acrosome biogenesis during spermiogenesis. This protein exhibits binding affinity in vitro to various phospholipids, including phosphatidylinositol 3-phosphate (PtdIns(3)P), phosphatidylinositol 4,5-bisphosphate (PtdIns(4,5)P2), phosphatidylinositol 4-phosphate (PtdIns(4)P), and phosphatidic acid (PA). Notably, unlike other members of the profilin family, Profilin-4 does not bind to actin in vitro. These distinctive properties underscore its specialized functions in the intricate processes of male reproductive physiology, particularly in the development of manchette and acrosome during sperm maturation.

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

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