NINJ1 Protein, Mouse (Cell-Free, His)

Cat. No.:	HY-P702385
Synonyms:	Ninjurin-1; Nerve injury-induced protein 1
Species:	Mouse
Source:	E. coli Cell-free
Accession:	O70131 (M1-Q152)
Gene ID:	18081
Molecular Weight:	18.1 kDa

PROPERTIES

AA Sequence	M E S G T E E Y E L N G D L R P G S P G S P D A L P P R W G L R N R P I N V N H Y A N K K S A A E S M L D I A L L M A N A S Q L K A V V E Q G N D F A F F V P L V V L I S I S L V L Q I G V G V L L I F L V K Y D L N N P A K H A K L D F L N N L A T G L V F I I V V V N I F I T A F G V Q K P V M D V A P R Q
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of Tris/PBS-based buffer, 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. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.
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	NINJ1 Protein serves as a pivotal effector in programmed cell death, mediating plasma membrane rupture in necroptosis and pyroptosis. Downstream of Gasdermin or MLKL activation, NINJ1 oligomerizes in response to death stimuli, introducing hydrophilic faces of two alpha helices into the hydrophobic membrane, leading to the release of damage-associated molecular patterns (DAMPs) and propagating the inflammatory response. Additionally, NINJ1 acts as a regulator of Toll-like receptor 4 (TLR4) signaling during systemic inflammation by directly binding lipopolysaccharide (LPS). It contributes to leukocyte migration, transendothelial migration of macrophages, and promotes monocyte migration to central nervous system inflammatory lesions. Functioning as a homophilic transmembrane adhesion molecule, NINJ1 is involved in axonal

growth, cell chemotaxis, angiogenesis, and cell-to-cell interactions between immune cells and endothelial cells. It plays diverse roles in nerve regeneration, angiogenesis, vascular formation, osteoclast development, striated muscle growth, and differentiation. The secreted form exhibits chemotactic activity and acts as an anti-inflammatory mediator by promoting monocyte recruitment, thereby ameliorating atherosclerosis.

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