

Ninjurin-1 Protein, Rat (HEK293, Fc)

Cat. No.:	HY-P77104
Synonyms:	Nerve injury-induced protein 1; NIN1; NINJ1
Species:	Rat
Source:	HEK293
Accession:	P70617 (M1-P79)
Gene ID:	25338
Molecular Weight:	Approximately 50 kDa

PROPERTIES

AA Sequence	M D P G T E E Y E L N G D L R P G S P G S P D A S 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 E F A F F V P
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in PBS, pH 7.4 . 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	<p>Ninjurin-1 Protein serves as a pivotal effector in programmed cell death, orchestrating plasma membrane rupture during necroptotic and pyroptotic pathways. Downstream of Gasdermin or MLKL activation, Ninjurin-1 oligomerizes, introducing hydrophilic faces into the membrane and inducing cytolysis, releasing damage-associated molecular patterns (DAMPs) that fuel the inflammatory response. Additionally, it regulates Toll-like receptor 4 signaling triggered by lipopolysaccharide during systemic inflammation by directly binding LPS. In inflammation, Ninjurin-1 promotes leukocyte migration and transendothelial migration of macrophages, facilitating monocyte recruitment to inflammatory sites and mitigating atherosclerosis. Beyond its role in inflammation, Ninjurin-1 acts as a homophilic transmembrane adhesion molecule, contributing to processes such as axonal growth, angiogenesis, and osteoclast development. Its secreted form exhibits chemotactic activity, enhancing monocyte recruitment and acting as an anti-inflammatory mediator in atherosclerosis.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA