NPPB Protein, Human (His, solution)

Cat. No.:	HY-P71119
Synonyms:	Natriuretic Peptides B; Gamma-Brain Natriuretic Peptide; NPPB
Species:	Human
Source:	E. coli
Accession:	P16860 (H27-H134)
Gene ID:	4879
Molecular Weight:	Approximately 16.0 kDa

PROPERTIES

AA Sequence	H P L G S P G S A S D L E T S G L Q E Q R N H L Q G K L S E L Q V E Q T S L E P L Q E S P R P T G V W K S R E V A T E G I R G H R K M V L Y T L R A P R S P K M V Q G S G C F G R K M D R I S S S S G L G C K V L R R H
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, 1 mM EDTA, 1 mM DTT, 20% Glycerol, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	TRIM5 protein serves as a capsid-specific restriction factor, impeding the infection of non-host-adapted retroviruses by blocking viral replication early in the viral life cycle, specifically after viral entry but before reverse transcription. Beyond its role as a capsid-specific restriction factor, TRIM5 also functions as a pattern recognition receptor, activating innate immune signaling in response to the retroviral capsid lattice. Upon binding to the viral capsid, TRIM5 triggers its E3 ubiquitin ligase activity, collaborating with the UBE2V1-UBE2N complex to generate 'Lys-63'-linked polyubiquitin chains. This ubiquitination process leads to the autophosphorylation of the MAP3K7/TAK1 complex, resulting in the induction and expression of NF-kappa-B and MAPK-responsive inflammatory genes, ultimately initiating an innate immune response in the infected cell. TRIM5's restrictive capabilities extend to various retroviruses, including N-tropic murine leukemia virus (N-MLV), equine infectious anemia virus (EIAV), simian immunodeficiency virus of macaques (SIVmac), feline immunodeficiency virus (FIV), and bovine immunodeficiency virus (BIV). Additionally, TRIM5 plays a crucial role in regulating autophagy by activating the

	autophagy regulator BECN1, causing its dissociation from inhibitors BCL2 and TAB2. Furthermore, TRIM5 acts as a selective autophagy receptor, recognizing and targeting HIV-1 capsid protein p24 for autophagic degradation.

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