GRIN1 Protein, Human (His)

Cat. No.:	HY-P72213
Synonyms:	GluN1; Glutamate [NMDA] receptor subunit zeta-1; Glutamate receptor ionotropic N methyl D aspartate 1; glutamate receptor ionotropic, NMDA 1; Grin1; MRD8
Species:	Human
Source:	E. coli
Accession:	Q05586 (R19-Q559)
Gene ID:	2902
Molecular Weight:	Approximately 64.6 kDa

PROPERTIES

AA Sequence	R A A C D P K I V N Q L N A T S V T H K N D H F T P T P V S R T V P P Y S H Q S R L E T L L E E R E I I L S A S E D D A L R Y A P D G I L G E N I T D P P R G C E F N E D G D R K F I I W P G G E T E K T C K E E F T V N G C I D L L I K L A R N G M M G E L L S G T I L V K K E I P R I G A V L S T R K H P N A I Q M A L S V Y T A G F Y R I P V S V W F E M M R V Y S K A E K V L Q F D A T V Y R A A A M L L Q L I N G K N E S V G N T N I W K T G A N Y S I M N L Q N P R G Y Q M S T R L D P V K K V I C T G T M N F T Y E V H L Q A D M I V A P L T S T L D S F M Q P F E Q M F R E A V N Q C E D L I S S Q V Y L G L T T R M S I Y S W N H I I L L V S P G T K N V T A L L N M T G S G Y V W L A H I S D A V G V V P L F K R V L M S S R K L V Q V G I Y N K I V T I H Q E P F P N D T S P G S P R V A D G K F G T Q E I N N E R A Q Y I E Q A N K R H G S W K I A I L V S H P P T P S D K S I H L S F L D D H E G R A A Q K M E A K E L E A R V V G E R E I S G N A A Q A V H E L L E K K Y A D G V T G R V G T H V I P N D R K V Y V K P T L S D G H T V P Q C C Y G F R V N N S N K K E W F S K P F K Y Q G L
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm solution of 10 mM Tris-HCl, 1 mM EDTA, 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.
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	GRIN1, a pivotal component of NMDA receptor complexes, participates in the constitution of heterotetrameric ligand-gated ion channels that exhibit both high calcium permeability and voltage-dependent sensitivity to magnesium. Channel activation hinges on the intricate interplay of neurotransmitter binding, with glutamate binding to the epsilon subunit and glycine binding to the zeta subunit, combined with membrane depolarization to alleviate channel inhibition by Mg(2+). The sensitivity to glutamate, as well as the kinetics of the channel, is contingent upon the specific subunit composition. GRIN1 forms heterotetrameric channels typically comprised of two zeta subunits and two epsilon subunits, where the latter can be either GRIN2A, GRIN2B, GRIN2C, or GRIN2D. Additionally, it can participate in the formation of channels with GRIN3A or GRIN3B. The dynamic subunit composition in vivo further underscores the regulatory intricacies of GRIN1's involvement in NMDA receptor function. Furthermore, GRIN1 engages in various protein interactions, such as those with SNX27, DLG4, MPDZ, LRFN1, LRFN2, MYZAP, and PRR7, contributing to its multifaceted role within cellular processes.

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

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