Recombinant GRID1 protein (His tag)

Catalog Number	546229
Synonyms	GluD1; GluR delta-1 subunit
Species	Human
Expression System	E. coli
Accession	Q9ULK0
Molecular Weight	Predictes a molecular mass of 31.33 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 32 kDa band.

Product Information

Sequence Region	21-285
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 21-285 aa (Q9ULK0) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	This recombinant protein product features a stable and soluble fragment (amino acids 21-285) of the human Glutamate receptor ionotropic, delta-1 (GluD1), a key synaptic organizer in the central nervous system. This fragment is ideal for structural studies and biochemical assays investigating synaptic adhesion and receptor modulation. Glutamate receptor ionotropic, delta-1 (GluD1), encoded by the GRID1 gene, is a member of the ionotropic glutamate receptor family that plays a crucial role in synaptic organization and signal transduction. Unlike typical glutamate receptors, GluD1 does not primarily bind glutamate but forms trans-synaptic adhesion complexes with presynaptic neurexins and cerebellins, regulating NMDA and AMPA receptor activity and influencing synaptic plasticity. It is localized to the postsynaptic cell membrane as a multi-pass membrane protein and has been reported to act as a receptor for GABA, modulating inhibitory synaptic plasticity through non-ionotropic mechanisms. While some studies suggest it can form cation-selective channels gated by glycine and D-serine or triggered by GRM1, recent research disputes its ligand-gated ion channel activity, highlighting its complex, multifunctional nature in neuronal signaling.