Recombinant NMDE4 protein (His tag)

Catalog Number	537201
Synonyms	GluN2D; EB11; Glutamate [NMDA] receptor subunit epsilon-4; N-methyl D-aspartate receptor subtype 2D; NMDAR2D; NR2D
Species	Human
Expression System	E. coli
Accession	O15399
Molecular Weight	Predictes a molecular mass of 20.82 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 21 kDa band.

Product Information

Sequence Region	675-843
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 675-843 aa (O15399) 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	Recombinant Human Glutamate receptor ionotropic, NMDA 2D (GluN2D) fragment (amino acids 675-843) is a high-purity, soluble protein designed for structural and biochemical studies. This 169-amino acid fragment, derived from the GRIN2D gene, offers a stable and functional unit ideal for investigating NMDA receptor mechanisms, synaptic plasticity, and calcium signaling pathways. The full-length GluN2D protein is a critical component of N-methyl-D-aspartate (NMDA) receptors, which function as heterotetrameric, ligand-gated cation channels with high calcium permeability. These receptors are voltage-dependent and blocked by Mg^{2+}, requiring binding of L-glutamate to GluN2, glycine or D-serine to GluN1, and membrane depolarization for activation. GluN2D confers unique attributes to channel properties, including activation kinetics, pH sensitivity, Ca^{2+} permeability, and modulation by allosteric effectors. Located in the postsynaptic cell membrane, this multi-pass membrane protein plays a fundamental role in synaptic plasticity, learning, and memory formation. The selected fragment (675-843) represents a stable, soluble region optimized for experimental applications without containing known functional domains.