Recombinant HOME3 protein (His tag)

Catalog Number	543732
Synonyms	Homer-3
Species	Human
Expression System	E. coli
Accession	Q9NSC5
Molecular Weight	Predictes a molecular mass of 15.16 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 15 kDa band.

Product Information

Sequence Region	1-120
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 1-120 aa (Q9NSC5) 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 Homer-3 (Homer protein homolog 3) fragment (amino acids 1-120) from Homo sapiens, encompassing the complete WH1 domain. This high-purity protein is an essential tool for investigating synaptic scaffolding, calcium signaling regulation, and T cell activation mechanisms in neuroscience and immunology research. Homer-3 is a postsynaptic density scaffolding protein that plays a critical role in neuronal signaling and cellular regulation. It functions by binding and cross-linking key receptors including GRM1, GRM5, ITPR1, DNM3, RYR1, RYR2, SHANK1, and SHANK3, thereby coupling surface glutamate receptors to intracellular calcium release from the endoplasmic reticulum. This protein contributes significantly to maintaining plasticity at glutamatergic synapses and additionally serves as a negative regulator of T cell activation by competitively inhibiting the calcineurin-NFAT pathway. Homer-3 is localized primarily in the cytoplasm, specifically enriched at postsynaptic densities and synapses in neuronal cells, where it organizes signaling complexes essential for neurotransmission and cellular communication.