Recombinant DOC10 protein (His tag)

Catalog Number	547920
Synonyms	Zizimin-3
Species	Human
Expression System	E. coli
Accession	Q96BY6
Molecular Weight	Predictes a molecular mass of 29.77 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 33 kDa band.

Product Information

Sequence Region	48-290
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 48-290 aa (Q96BY6) 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 DOCK10 (48-290) Fragment is a high-purity protein product encompassing the Pleckstrin Homology (PH) domain of Dedicator of Cytokinesis Protein 10 (Zizimin-3). This 243-amino acid fragment serves as an essential tool for investigating the specific mechanisms of CDC42 and RAC1 activation, dendritic spine morphogenesis, and B-cell lymphopoiesis regulation. Dedicator of Cytokinesis Protein 10 (DOCK10) is a guanine nucleotide-exchange factor (GEF) that activates the small GTPases CDC42 and RAC1 by facilitating the exchange of bound GDP for GTP. It plays a critical role in neuronal development, being essential for dendritic spine morphogenesis in Purkinje cells and hippocampal neurons through a CDC42-mediated pathway. Additionally, DOCK10 sustains B-cell lymphopoiesis in secondary lymphoid tissues and regulates the expression of FCER2/CD23. The protein localizes to the nucleus, cytoplasm, and cell projections such as dendritic spines, indicating its involvement in diverse cellular processes. The provided fragment (amino acids 48-290) contains the PH domain (residues 181-290), enabling focused studies on domain-specific functions in cellular signaling and morphology.