Recombinant ANK2 protein (His tag)

Catalog Number	544817
Synonyms	ANK-2; Ankyrin-B; Brain ankyrin; Non-erythroid ankyrin
Species	Human
Expression System	E. coli
Accession	Q01484
Molecular Weight	Predictes a molecular mass of 32.55 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 33 kDa band.

Product Information

Sequence Region	1054-1330
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 1054-1330 aa (Q01484) 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 Ankyrin-2 (ANK-2) Fragment (aa 1054-1330) is a high-purity protein designed for studying the specific functions of the ZU5 2 domain. This fragment serves as an essential tool for researchers investigating the role of Ankyrin-2 in cellular localization, membrane stabilization, and intracellular transport mechanisms. Ankyrin-2 (ANK-2), also known as Ankyrin-B or Brain ankyrin, is a critical scaffolding protein in Homo sapiens that plays an essential role in the localization and membrane stabilization of ion transporters and channels in various cell types, including cardiomyocytes and skeletal muscle cells. It coordinates the assembly of key proteins such as the Na/Ca exchanger (SLC8A1/NCX1), Na/K ATPases (ATP1A1 and ATP1A2), and inositol 1,4,5-trisphosphate receptors at specific cellular sites like the sarcoplasmic reticulum and sarcolemma. Additionally, Ankyrin-2 is involved in endocytosis, intracellular protein transport, and polarized trafficking, facilitating processes such as cell migration by recruiting RABGAP1L to early endosomes. The protein localizes to diverse subcellular compartments, including the cytoplasm, cytoskeleton, cell membrane, early and recycling endosomes, lysosomes, mitochondria, and specialized structures like the M line and Z line in sarcomeres, highlighting its broad functional significance in cellular organization and signaling.