Recombinant EFC4B protein (His tag)

Catalog Number	541149
Synonyms	Calcium release-activated calcium channel regulator 2A; CRAC channel regulator 2A; Calcium release-activated channel regulator 2A; Ras-related protein Rab-46
Species	Human
Expression System	E. coli
Accession	Q9BSW2
Molecular Weight	Predictes a molecular mass of 29.06 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 35 kDa band.

Product Information

Sequence Region	157-383
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 157-383 aa (Q9BSW2) 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 EF-hand calcium-binding domain-containing protein 4B (CRACR2A) fragment (residues 157-383) from Homo sapiens. This 227-amino acid fragment is a stable, soluble unit ideal for studying calcium signaling mechanisms, store-operated calcium entry (SOCE), and CRAC channel regulation in T-cells, supporting structural and biochemical research applications. The full-length CRACR2A protein is a multifunctional calcium-sensor and Rab GTPase critical for immune cell function. Isoform 1 regulates store-operated calcium entry (SOCE) by facilitating ORAI1 and STIM1 clustering at endoplasmic reticulum-plasma membrane junctions upon low cytoplasmic calcium, with dissociation upon calcium increase to modulate CRAC channel activity. Isoform 2 acts as a Rab GTPase involved in vesicle trafficking, including Weibel-Palade body transport to the microtubule organizing center in endothelial cells during inflammation, and bridges T-cell receptor signaling pathways (Ca^{2+}-NFAT and JNK) to influence T-cell activation and differentiation. Subcellular localization varies by isoform and includes the cytoplasm, Golgi apparatus, vesicles, and cell membrane, with dynamics influenced by calcium levels, GTP-binding, and cellular stimuli such as T-cell activation or histamine exposure.