Recombinant TRPM6 protein (His tag)

Catalog Number	545849
Synonyms	Channel kinase 2; Melastatin-related TRP cation channel 6
Species	Human
Expression System	E. coli
Accession	Q9BX84
Molecular Weight	Predictes a molecular mass of 29.92 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 30 kDa band.

Product Information

Sequence Region	1737-1980
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 1737-1980 aa (Q9BX84) 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 TRPM6 Kinase Fragment (1737-1980) is a high-purity protein fragment encompassing the alpha-type protein kinase domain of human Transient Receptor Potential Cation Channel Subfamily M Member 6. This fragment is specifically designed for researchers studying the kinase-mediated regulatory functions of TRPM6, offering a focused tool to investigate phosphorylation mechanisms and downstream signaling pathways in magnesium homeostasis and cellular differentiation. TRPM6 is a bifunctional protein that combines an ion channel with an intrinsic kinase domain, enabling it to modulate cellular functions either by conducting ions or phosphorylating downstream targets. It plays a crucial role in magnesium homeostasis, particularly in epithelial Mg^{2+} transport in the gut and kidney. The full-length protein localizes to the apical cell membrane, where it may function as a homomeric channel or as a subunit of heteromeric TRPM6-TRPM7 complexes. Notably, the C-terminal kinase domain can be cleaved and translocate to the nucleus, binding chromatin-remodeling complexes to phosphorylate histones, influencing cell differentiation and development. This recombinant fragment (1737-1980) isolates the kinase domain, providing a targeted resource for studying its nuclear and cytoplasmic regulatory roles.