Recombinant TRPM2 protein (His tag)

Catalog Number	546579
Synonyms	Estrogen-responsive element-associated gene 1 protein; Long transient receptor potential channel 2; LTrpC-2; LTrpC2; Transient receptor potential channel 7; TrpC7; Transient receptor potential melastatin 2
Species	Human
Expression System	E. coli
Accession	O94759
Molecular Weight	Predictes a molecular mass of 32.18 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 32 kDa band.

Product Information

Sequence Region	1238-1503
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 1238-1503 aa (O94759) 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 TRPM2 Nudix Hydrolase Domain (residues 1238-1503) is a high-purity protein fragment designed for studying the specific ligand-binding properties of the transient receptor potential cation channel subfamily M member 2. This 266-amino acid construct encompasses the complete Nudix hydrolase domain, making it an essential tool for investigating ADP-ribose-mediated channel regulation and calcium signaling mechanisms in oxidative stress responses. TRPM2 (Transient Receptor Potential Melastatin 2) is a nonselective, voltage-independent cation channel that mediates Na(+) and Ca(2+) influx, leading to increased cytoplasmic Ca(2+) levels. Functioning as a ligand-gated ion channel, it is activated by intracellular adenosine diphosphate ribose (ADP-ribose), Ca(2+), warm temperature, and oxidative stress. The channel plays crucial roles in numerous physiological processes including insulin secretion, innate immune responses, phagocytosis, cytokine release, dendritic cell differentiation, and behavioral responses to moderate heat. TRPM2 is primarily localized to the cell membrane as a multi-pass membrane protein, with additional presence in cytoplasmic vesicles and lysosomes. The Nudix hydrolase domain contained within this fragment (residues 1354-1498) is critical for ADP-ribose binding, which induces conformational changes that prime the channel for Ca(2+)-dependent activation, making this fragment particularly valuable for studying the molecular mechanisms of channel gating and regulation.