Recombinant SPHK2 protein (His tag)

Catalog Number	541337
Synonyms	SK 2; SPK 2
Species	Human
Expression System	E. coli
Accession	Q9NRA0
Molecular Weight	Predictes a molecular mass of 38.00 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 38 kDa band.

Product Information

Sequence Region	48-382
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 48-382 aa (Q9NRA0) 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 Sphingosine Kinase 2 (SK2) Fragment (residues 48-382) is a high-purity protein designed for investigating the catalytic domain of SPHK2. This 335-amino acid fragment fully encompasses the DAGKc domain, making it an ideal tool for studying sphingosine phosphorylation, lipid signaling, and the enzyme's role in apoptosis, mitochondrial function, and epigenetic regulation. Sphingosine Kinase 2 (SK2), encoded by the SPHK2 gene in humans, catalyzes the phosphorylation of sphingosine to sphingosine-1-phosphate (SPP), a key lipid mediator with diverse intra- and extracellular functions. Unlike its prosurvival counterpart SPHK1, SK2 promotes apoptosis and increases intracellular ceramide levels, impacting cell growth. It localizes to the cytoplasm, nucleus, endoplasmic reticulum, and mitochondrial inner membrane, where it supports cytochrome-c oxidase assembly and respiration. In the nucleus, SK2 interacts with HDAC1 and HDAC2, inhibiting their activity and enhancing histone acetylation, thereby influencing epigenetic gene regulation. It also plays roles in mast cell activation, dopaminergic neuron function, and glucose and lipid metabolism, highlighting its broad significance in cellular signaling and disease pathways.