Recombinant CHP2 protein (His tag)

Catalog Number	541793
Synonyms	Hepatocellular carcinoma-associated antigen 520
Species	Human
Expression System	E. coli
Accession	O43745
Molecular Weight	Predictes a molecular mass of 23.98 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 27 kDa band.

Product Information

Sequence Region	2-196
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 2-196 aa (O43745) 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 Calcineurin B Homologous Protein 2 (CHP2) Fragment (aa 2-196) is a high-purity protein designed for studying calcium signaling and pH regulation. This fragment encompasses all four EF-hand domains, making it an ideal tool for investigating ion binding, protein interactions, and cellular homeostasis mechanisms. Calcineurin B Homologous Protein 2 (CHP2), also known as Hepatocellular carcinoma-associated antigen 520, serves as a critical cofactor in cellular pH regulation by activating plasma membrane Na(+)/H(+) exchangers, particularly SLC9A1/NHE1. This activity enhances cellular survival under serum deprivation by maintaining pH balance. Additionally, CHP2 regulates cell proliferation and tumor growth through calcium-dependent activation of PPP3CA phosphatase, functioning as an activator of the calcineurin/NFAT signaling pathway. It facilitates nuclear translocation of transcription factors like NFATC3, influencing gene expression. CHP2 exhibits dynamic subcellular localization, predominantly found in juxtanuclear regions while also shuttling between the nucleus, cytoplasm, and cell membrane, where it colocalizes with exchange proteins to execute its regulatory functions.