Recombinant GNAI2 protein (His tag)

Catalog Number	544306
Synonyms	i; Adenylate cyclase-inhibiting G alpha protein
Species	Human
Expression System	E. coli
Accession	P04899
Molecular Weight	Predictes a molecular mass of 41.98 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 46 kDa band.

Product Information

Sequence Region	2-355
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 2-355 aa (P04899) 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 GNAI2 Protein Fragment (aa 2-355) - A high-purity preparation of the Guanine nucleotide-binding protein G(i) subunit alpha-2, specifically engineered to encompass the complete G-alpha functional domains. This fragment serves as an essential tool for investigating adenylate cyclase inhibition and G-protein coupled receptor signaling mechanisms. Guanine nucleotide-binding protein G(i) subunit alpha-2 (GNAI2) functions as a critical modulator in transmembrane signaling systems, primarily involved in hormonal regulation of adenylate cyclase through inhibition in response to beta-adrenergic stimuli. Research indicates additional roles in cell division processes. The protein exhibits dynamic subcellular localization, primarily found in the cytoplasm with specific accumulation at the centrosomes of interphase and mitotic cells, and is also detected at the cleavage furrow and midbody during cell division. As a membrane-associated protein through lipid-anchor mechanisms, GNAI2 participates in diverse cellular signaling pathways. The isoform sGi2 has been shown to regulate dopamine receptor DRD2 cell surface density by sequestering them intracellularly, highlighting its importance in neurotransmitter receptor trafficking and signaling modulation.