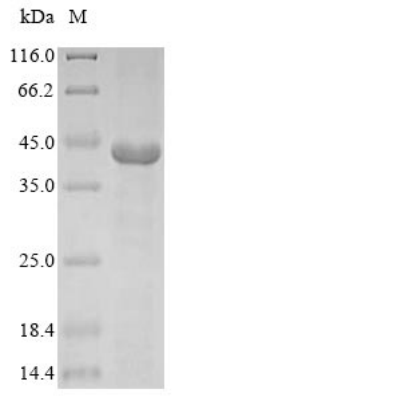
Recombinant Bovine Guanine nucleotide-binding protein G (t) subunit alpha-2 (GNAT2)

Product Code	CSB-EP009599BO
Relevance	Guanine nucleotide-binding proteins (G proteins) are involved as modulators or transducers in various transmembrane signaling systems. Transducin is an amplifier and one of the transducers of a visual impulse that performs the coupling between rhodopsin and cGMP-phosphodiesterase.
Abbreviation	Recombinant Bovine GNAT2 protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P04696
Product Type	Recombinant Protein
Immunogen Species	Bos taurus (Bovine)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	GSGASAEDKELAKRSKELEKKLQEDADKEAKTVKLLLLGAGESGKSTIVKQMKI IHQDGYSPEECLEYKAIIYGNVLQSILAIIRAMPTLGIDYAEVSCVDNGRQLNNLA DSIEEGTMPPELVEVIRKLWKDGGVQACFDRAAEYQLNDSASYYLNQLDRITA PDYLPNEQDVLRSRVKTTGIIETKFSVKDLNFRMFDVGGQRSERKKWIHCFEG VTCIIFCAALSAYDMVLVEDDEVNRMHESLHLFNSICNHKFFAATSIVLFLNKKD LFEEKIKKVHLSICFPEYDGNNSYEDAGNYIKSQFLDLNMRKDVKEIYSHMTCA TDTQNVKFVFDAVTDIIIKENLKDCGLF
Research Area	Neuroscience
Source	E.coli
Target Names	GNAT2
Protein Names	Transducin alpha-2 chain
Expression Region	2-354aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	44.0 kDa
Protein Length	Full Length of Mature Protein
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Amino acids 2-354 constitute the expression domain of recombinant Bovine GNAT2. The expected molecular weight for the GNAT2 protein is calculated to be 44 kDa. This GNAT2 recombinant protein is manufactured in e.coli. The GNAT2 gene fragment has been modified by fusing the N-terminal 6xHis tag, providing convenience in detecting and purifying the recombinant GNAT2 protein during the following stages.

The bovine guanine nucleotide-binding protein G(t) subunit alpha-2 (GNAT2) is a member of the G protein subunit alpha transducin family. GNAT2 plays a crucial role in visual signal transduction in the retina. Specifically, GNAT2 is involved in the phototransduction cascade within rod and cone cells. Upon absorption of light by photoreceptor cells, GNAT2 is activated, leading to the activation of phosphodiesterase and the hydrolysis of cGMP. This process ultimately results in the closure of cGMP-gated ion channels, hyperpolarization of the photoreceptor cell membrane, and the initiation of visual signal transmission to the brain. Understanding GNAT2's function is essential for unraveling the molecular mechanisms underlying vision and visual signal processing in bovines.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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