10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Gα t1 Polyclonal Antibody

Catalog # AP70277

Product Information

Application	WB, E
Primary Accession	P11488
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	40041

Additional Information

Gene ID	2779
Other Names	GNAT1; GNATR; Guanine nucleotide-binding protein G(t) subunit alpha-1; Transducin alpha-1 chain
Dilution	WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/40000. Not yet tested in other applications. E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

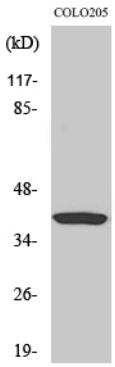
Name	GNAT1 (HGNC:4393)
Synonyms	GNATR
Function	Alpha subunit of the heterotrimeric guanine nucleotide- binding protein (G protein) that transduces signals from the G protein- coupled photoreceptor rhodopsin (RHO). Essential for normal RHO- mediated light perception in retinal rod photoreceptors (PubMed:22190596). Functions as a GTPase, cycling between an active GTP-bound state and an inactive GDP-bound state. Under dim light conditions, photoactivated RHO promotes GDP release and GTP binding. In its active state, GNAT1 stimulates downstream effectors, including rod cGMP-phosphodiesterase (PDE6) complex, to mediate the phototransduction cascade (By similarity). Activation of the PDE6 complex occurs through binding and repositioning of the inhibitory PDE6 gamma subunits (PDE6G), thereby promoting catalytic activity (By similarity).
Cellular Location	Photoreceptor outer segment membrane {ECO:0000250|UniProtKB:P04695}; Peripheral membrane protein {ECO:0000250|UniProtKB:P04695}. Membrane {ECO:0000250|UniProtKB:P04695}; Peripheral membrane protein

	{ECO:0000250|UniProtKB:P04695}. Photoreceptor inner segment {ECO:0000250|UniProtKB:P20612}. Note=Localizes mainly in the outer segment in the dark-adapted state, whereas is translocated to the inner part of the photoreceptors in the light-adapted state. During dark- adapted conditions, in the presence of UNC119 mislocalizes from the outer segment to the inner part of rod photoreceptors which leads to decreased photoreceptor damage caused by light {ECO:0000250|UniProtKB:P20612}
Tissue Location	Rod photoreceptor cells (PubMed:1614872). Predominantly expressed in the retina followed by the ciliary body, iris and retinal pigment epithelium (PubMed:22190596)

Background

Functions as signal transducer for the rod photoreceptor RHO. Required for normal RHO-mediated light perception by the retina (PubMed:22190596). Guanine nucleotide-binding proteins (G proteins) function as transducers downstream of G protein-coupled receptors (GPCRs), such as the photoreceptor RHO. The alpha chain contains the guanine nucleotide binding site and alternates between an active, GTP-bound state and an inactive, GDP-bound state. Activated RHO promotes GDP release and GTP binding. Signaling is mediated via downstream effector proteins, such as cGMP-phosphodiesterase (By similarity).

Images



Western Blot analysis of various cells using Gα t1 Polyclonal Antibody diluted at 1：2000

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.