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Rabbit Anti-Transducin alpha antibody

SL16569R

Product Name:	Transducin alpha
Chinese Name:	GBT1蛋白抗体
Alias:	CSNBAD3; GBT1; GNAT1; GNATR; GNAT1_HUMAN; guanine nucleotide binding protein (G protein) alpha transducing activity polypeptide 1; guanine nucleotide binding protein G(T) alpha 1 subunit; guanine nucleotide-binding protein G(t) subunit alpha-1; Rod specific transducin; rod-type transducin alpha subunit; transducin alpha-1 chain; transducin, rod-specific.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Rabbit,Sheep,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	40kDa
Cellular localization:	cytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Transducin alpha:11-110/350
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	Transducin is a 3-subunit guanine nucleotide-binding protein (G protein) which stimulates the coupling of rhodopsin and cGMP-phoshodiesterase during visual impulses. The transducin alpha subunits in rods and cones are encoded by separate

genes. This gene encodes the alpha subunit in rods. This gene is also expressed in other cells, and has been implicated in bitter taste transduction in rat taste cells. Mutations in this gene result in autosomal dominant congenital stationary night blindness. Multiple alternatively spliced variants, encoding the same protein, have been identified. [provided by RefSeq, Feb 2009]

Function:
Vision involves the conversion of light into electrochemical signals that are processed by the retina and subsequently sent to and interpreted by the brain. The process of converting light into an electrochemical signal begins when the membrane-bound protein, rhodopsin, absorbs light within the retina. Photoexcitation of rhodopsin causes the cytoplasmic surface of the protein to become catalytically active. In the active state, rhodopsin activates transducin, a GTP binding protein. Once activated, transducin promotes the hydrolysis of cGMP by phosphodiesterase (PDE). The decrease of intracellular cGMP concentration causes the ion channels within the outer segment of the rod or cone to close, thus causing membrane hyperpolarization and, eventually, signal transmission. Rhodopsin activity is believed to be shut off by phosphorylation followed by binding of the soluble protein, arrestin. Transducin, once activated by rhodopsin, promotes the hydrolysis of cGMP by PDE. The subunit composition of transducin differs between different photoreceptor cells. Rod transducin consists of rod transducin alpha (Tr alpha), T beta, and T gamma. Cone transducin is composed of cone transducin alpha (Tc alpha), T beta and T gamma. Differential transducin subunit composition of transducin is believed to be responsible for the different light sensitivities between photoreceptive cells.

Subunit:
G proteins are composed of 3 units; alpha, beta and gamma. The alpha chain contains the guanine nucleotide binding site. Interacts (when myristoylated) with UNC119; interaction is required for localization in sensory neurons.

Tissue Specificity:
Rod.

DISEASE:
Night blindness, congenital stationary, autosomal dominant 3 (CSNBAD3) [MIM:610444]: A non-progressive retinal disorder characterized by impaired night vision, often associated with nystagmus and myopia. Note=The disease is caused by mutations affecting the gene represented in this entry.

Similarity:
Belongs to the G-alpha family. G(i/o/t/z) subfamily.

SWISS:
P11488

Gene ID:

	2779 **Database links:** Entrez Gene: 2779 Human Entrez Gene: 14685 Mouse Omim: 139330 Human SwissProt: P11488 Human Unigene: 517978 Human Unigene: 284853 Mouse **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.