abcam

Product datasheet

Anti-GNAT1 antibody ab3504

3 References 1 Image

Overview

Product name	Anti-GNAT1 antibody
Description	Rabbit polyclonal to GNAT1
Host species	Rabbit
Specificity	Detects Rod Transducin alpha from bovine outer rod segments and sheep retinal extract.
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Sheep **Predicted to work with:** Rat, Dog, Human, Xenopus laevis
Immunogen	Synthetic peptide corresponding to Human GNAT1 aa 1-100. Run BLAST with ExPASy Run BLAST with NCBI
Positive control	WB: sheep retinal extracts
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS
Purity	Immunogen affinity purified
Primary antibody notes	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.

Clonality Polyclonal

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab3504 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 38 kDa (predicted molecular weight: 40 kDa).

Target

Function 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.

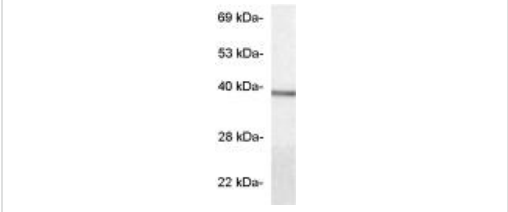
Tissue specificity Rod. Predominantly expressed in the retina followed by the ciliary body, iris and retinal pigment epithelium.

Involvement in disease Night blindness, congenital stationary, autosomal dominant 3
Night blindness, congenital stationary, 1C

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

Developmental stage Expressed at approximately postnatal day 7.

Images



Western blot - Anti-GNAT1 antibody (ab3504)

Western blot detection of Trabsducin alpha on sheep retinal extracts using ab3504.

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