

# Visual Arrestin (G-2): sc-166353

## BACKGROUND

Members of the Arrestin/ $\beta$ -Arrestin protein family are thought to participate in agonist-mediated desensitization of G protein-coupled receptors, and cause specific dampening of cellular responses to stimuli such as hormones, neurotransmitters or sensory signals. Visual Arrestin, also known as arrestin, retinal S-antigen or S-arrestin, is a major soluble photoreceptor protein that regulates light-dependent signal transduction through G protein-coupled receptor (rhodopsin) activation. Visual Arrestin is expressed in retinal photoreceptor cells and the pineal gland. Visual Arrestin is the major pathogenic autoantigen in inflammatory eye disease, such as uveoretinitis and Oguchi disease, a rare autosomal recessive form of night blindness.

## REFERENCES

1. Banga, J.P., LeRoy, F., Suleyman, S., Kasp, E., Brown, E. and Dumonde, D. 1988. Analysis of antigenic determinants of retinal S-antigen with monoclonal antibodies. *Invest. Ophthalmol. Vis. Sci.* 29: 12-21.
2. Palczewski, K., McDowell, J.H., Jakes, S., Ingebritsen, T.S. and Hargrave, P.A. 1989. Regulation of rhodopsin dephosphorylation by Arrestin. *J. Biol. Chem.* 264: 15770-15773.
3. Yamaki, K., Tsuda, M., Kikuchi, T., Chen, K.H., Huang, K.P. and Shinohara, T. 1990. Structural organization of the human S-antigen gene. cDNA, amino acid, intron, exon, promoter, *in vitro* transcription, retina and pineal gland. *J. Biol. Chem.* 265: 20757-20762.
4. Roberts, A.J., Kasp, E., Stanford, M., Dumonde, D.C. and Banga, J.P. 1992. Induction of experimental autoimmune uveoretinitis in Lewis rats with purified recombinant human retinal S-antigen fusion protein. *Eur. J. Immunol.* 22: 951-956.
5. Saga, M., Mashima, Y., Kudoh, J., Oguchi, Y. and Shimizu, N. 2004. Gene analysis and evaluation of the single founder effect in Japanese patients with Oguchi disease. *Jpn. J. Ophthalmol.* 48: 350-352.
6. LocusLink Report (LocusID: 6295). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: SAG (human) mapping to 2q37.1; Sag (mouse) mapping to 1 D.

## SOURCE

Visual Arrestin (G-2) is a mouse monoclonal antibody raised against amino acids 316-405 mapping at the C-terminus of Visual Arrestin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

Visual Arrestin (G-2) is recommended for detection of Visual Arrestin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Visual Arrestin siRNA (h): sc-45467, Visual Arrestin siRNA (m): sc-45468, Visual Arrestin shRNA Plasmid (h): sc-45467-SH, Visual Arrestin shRNA Plasmid (m): sc-45468-SH, Visual Arrestin shRNA (h) Lentiviral Particles: sc-45467-V and Visual Arrestin shRNA (m) Lentiviral Particles: sc-45468-V.

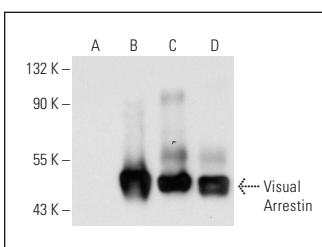
Molecular Weight of Visual Arrestin: 48 kDa.

Positive Controls: Visual Arrestin (m): 293T Lysate: sc-124570, mouse eye extract: sc-364241 or rat eye extract: sc-364805.

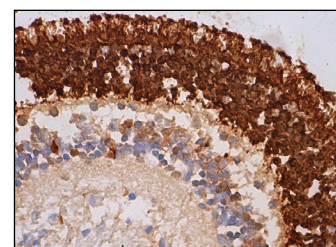
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Visual Arrestin (G-2): sc-166353. Western blot analysis of Visual Arrestin expression in non-transfected: sc-117752 (A) and mouse Visual Arrestin transfected: sc-124570 (B) 293T whole cell lysates and mouse eye (C) and rat eye (D) tissue extracts.



Visual Arrestin (G-2): sc-166353. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fetal eye tissue showing cytoplasmic and nuclear staining of cells in retina.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.