

Arrestin-C (2D7): sc-293296

BACKGROUND

Members of Arrestin/ β -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. Arrestin-C, also known as retinal cone Arrestin-3, X-Arrestin or cArr, is a member of the Arrestin family of proteins. It is predominantly found in the retina and pineal gland and localizes to the inner and outer segments of red-, green- and blue-cone photoreceptors and the inner plexiform regions. Two Arrestin-C isoforms exist due to alternative splicing. Isoform 1 is the mature full length protein and isoform 2 is truncated, ending with an Arginine for amino acid residue 359. Arrestin-C expression is stimulated by retinoic acid. It may play a role in retina-specific signal transduction and bind to photoactivated-phosphorylated red/green opsins. In addition, Arrestin-C forms homodimers and oligomers with β -Arrestins and may regulate β -Arrestin mediated signaling.

REFERENCES

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3. Fujimaki, T., et al. 2004. Truncation and mutagenesis analysis of the human X-Arrestin gene promoter. *Gene* 339: 139-147.
4. Sutton, R.B., et al. 2005. Crystal structure of cone Arrestin at 2.3Å: evolution of receptor specificity. *J. Mol. Biol.* 354: 1069-1080.
5. van der Spuy, J., et al. 2005. Predominant rod photoreceptor degeneration in Leber congenital amaurosis. *Mol. Vis.* 11: 542-553.
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7. Balse, E., et al. 2006. Glycine receptors in a population of adult mammalian cones. *J. Physiol.* 571: 391-401.
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CHROMOSOMAL LOCATION

Genetic locus: ARR3 (human) mapping to Xq13.1.

SOURCE

Arrestin-C (2D7) is a mouse monoclonal antibody raised against amino acids 1-359 representing full length Arrestin-C of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Arrestin-C (2D7) is recommended for detection of Arrestin-C of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

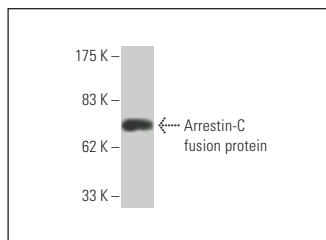
Suitable for use as control antibody for Arrestin-C siRNA (h): sc-61996, Arrestin-C shRNA Plasmid (h): sc-61996-SH and Arrestin-C shRNA (h) Lentiviral Particles: sc-61996-V.

Molecular Weight of Arrestin-C: 43 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® 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).

DATA



Arrestin-C (2D7): sc-293296. Western blot analysis of human recombinant Arrestin-C fusion protein.

SELECT PRODUCT CITATIONS

1. Weh, E., et al. 2020. Hexokinase 2 is dispensable for photoreceptor development but is required for survival during aging and outer retinal stress. *Cell Death Dis.* 11: 422.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.