Revision 1

Store at -20C

#11828

Arrestin 1/S-Arrestin Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	52	Rabbit	#P10523	6295

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Arrestin 1/S-Arrestin Antibody recognizes endogenous levels of total Arrestin 1/S-Arrestin protein.

Species predicted to react based on 100% sequence homology

Monkey

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala163 of human Arrestin 1/S-Arrestin protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Arrestin proteins function as negative regulators of G protein-coupled receptor (GPCR) signaling. Cognate ligand binding stimulates GPCR phosphorylation, which is followed by binding of arrestin to the phosphorylated GPCR and the eventual internalization of the receptor and desensitization of GPCR signaling (1). Four distinct mammalian arrestin proteins are known. Arrestin 1 (also known as S-arrestin) and arrestin 4 (X-arrestin) are localized to retinal rods and cones, respectively. Arrestin 2 (also known as β-arrestin 1) and arrestin 3 (β-arrestin 2) are ubiquitously expressed and bind to most GPCRs (2). β-arrestins function as adaptor and scaffold proteins and play important roles in other processes, such as recruiting c-Src family proteins to GPCRs in Erk activation pathways (3,4). β-arrestins are also involved in some receptor tyrosine kinase signaling pathways (5-8). Additional evidence suggests that β-arrestins translocate to the nucleus and help regulate transcription by binding transcriptional cofactors (9,10).
Arrestin 1/S-Arrestin inactivates rhodopsin-mediated signaling through binding to the light-activated phosphorylated rod photoreceptor, thereby preventing coupling to transducin, rhodopsin's cognate G protein (11). Research studies have proposed that mutations in the Arrestin 1/S-Arrestin gene are linked to Oguchi disease (12,13) and Retinitis Pigmentosa (14).

Background References

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6. Waters, C. et al. (2004) *Semin Cell Dev Biol* 15, 309-23.
7. Lefkowitz, R.J. and Whalen, E.J. (2004) *Curr Opin Cell Biol* 16, 162-8.
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9. Kang, J. et al. (2005) *Cell* 123, 833-47.
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11. Gurevich, V.V. et al. (2011) *Prog Retin Eye Res* 30, 405-30.
12. Yamada, T. et al. (1999) *Ophthalmic Genet* 20, 117-20.
13. Waheed, N.K. et al. (2012) *Mol Vis* 18, 1253-9.
14. Nakazawa, M. et al. (1998) *Arch Ophthalmol* 116, 498-501.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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