

Arrestin-C (m): 293T Lysate: sc-118572

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

1. Ferguson, S.S. 2001. Evolving concepts in G protein-coupled receptor endocytosis: the role in receptor desensitization and signaling. *Pharmacol. Rev.* 53: 1-24.
2. Li, A., Zhu, X. and Craft, C.M. 2002. Retinoic acid upregulates cone Arrestin expression in retinoblastoma cells through a *cis* element in the distal promoter region. *Invest. Ophthalmol. Vis. Sci.* 43: 1375-1383.
3. Fujimaki, T., Huang, Z.Y., Kitagawa, H., Sakuma, H., Murakami, A., Kanai, A., McLaren, M.J. and Inana, G. 2004. Truncation and mutagenesis analysis of the human X-Arrestin gene promoter. *Gene* 339: 139-147.
4. Sutton, R.B., Vishnivetskiy, S.A., Robert, J., Hanson, S.M., Raman, D., Knox, B.E., Kono, M., Navarro, J. and Gurevich, V.V. 2005. Crystal structure of cone Arrestin at 2.3Å: evolution of receptor specificity. *J. Mol. Biol.* 354: 1069-1080.
5. van der Spuy, J., Munro, P.M., Luthert, P.J., Preising, M.N., Bek, T., Heegaard, S. and Cheetham, M.E. 2005. Predominant rod photoreceptor degeneration in Leber congenital amaurosis. *Mol. Vis.* 11: 542-553.
6. Macey, T.A., Liu, Y., Gurevich, V.V. and Neve, K.A. 2005. Dopamine D1 receptor interaction with Arrestin3 in neostriatal neurons. *J. Neurochem.* 93: 128-134.
7. Balse, E., Tessier, L.H., Forster, V., Roux, M.J., Sahel, J.A. and Picaud, S. 2006. Glycine receptors in a population of adult mammalian cones. *J. Physiol.* 571: 391-401.
8. Hanson, S.M. and Gurevich, V.V. 2006. The differential engagement of Arrestin surface charges by the various functional forms of the receptor. *J. Biol. Chem.* 281: 3458-3462.
9. Xiao, K., McClatchy, D.B., Shukla, A.K., Zhao, Y., Chen, M., Shenoy, S.K. and Lefkowitz, R.J. 2007. Functional specialization of β -Arrestin interactions revealed by proteomic analysis. *Proc. Natl. Acad. Sci. USA* 104: 12011-12016.

CHROMOSOMAL LOCATION

Genetic locus: Arr3 (mouse) mapping to X C3.

PRODUCT

Arrestin-C (m): 293T Lysate represents a lysate of mouse Arrestin-C transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

Arrestin-C (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Arrestin-C antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.