Revision 3

#30036 Store at -20C

β-Arrestin 1 (D7Z3W) XP® Rabbit mAb

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:
WB, IHC-P	H M R	Endogenous	51	Rabbit IgG	#P49407	408

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunohistochemistry (Paraffin)	1:300

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #47698.

Specificity / Sensitivity

β-Arrestin (D7Z3W) XP® Rabbit mAb recognizes endogenous levels of total β-arrestin 1 protein. This antibody does not cross-react with other arrestin proteins.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg363 of human β-arrestin 1 protein.

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).
The non-visual β-arrestins respond to glucocorticoid signaling, with differential responses observed among family members. Specifically, β-arrestin 1 expression is increased in response to glucocorticoid receptor activation whereas β-arrestin 2 shows a concomitant decrease in expression (11).

Background References

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4. Luttrell, L.M. et al. (1999) *Curr Opin Cell Biol* 11, 177-83.
5. Luttrell, L.M. and Lefkowitz, R.J. (2002) *J Cell Sci* 115, 455-65.
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.
10. Ma, L. and Pei, G. (2007) *J Cell Sci* 120, 213-8.
11. Oakley, R.H. et al. (2012) *Proc Natl Acad Sci U S A* 109, 17591-6.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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Limited Uses