

# $\beta$ -Arrestin-2 (F-2): sc-514791

## BACKGROUND

The members of the G protein-coupled receptor family are distinguished by their slow transmitting response to ligand binding. These seven transmembrane proteins include the adrenergic, serotonin and dopamine receptors. The effect of the signaling molecule can be excitatory or inhibitory depending on the type of receptor to which it binds. Members of the  $\beta$ -Arrestin family regulate receptor binding to G proteins.  $\beta$ -Arrestins have been found to be located at postsynaptic sites, where they are thought to act in concert with  $\beta$ ARK ( $\beta$ ARK1, also designated GRK 2, or  $\beta$ ARK2, also designated GRK 3) to regulate G protein-coupled neurotransmitter receptors. Expression of  $\beta$ -Arrestin-1 and  $\beta$ -Arrestin-2 is seen predominantly in spleen and neuronal tissues. It has been shown that  $\beta$ -Arrestin-1 expression is modulated by intracellular cAMP, which may be a novel mechanism for the regulation of receptor-mediated responses.

## CHROMOSOMAL LOCATION

Genetic locus: ARRB2 (human) mapping to 17p13.2; Arrb2 (mouse) mapping to 11 B3.

## SOURCE

$\beta$ -Arrestin-2 (F-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 250-270 near the C-terminus of  $\beta$ -Arrestin-2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514791 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

$\beta$ -Arrestin-2 (F-2) is recommended for detection of  $\beta$ -Arrestin-2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for  $\beta$ -Arrestin-2 siRNA (h): sc-29208,  $\beta$ -Arrestin-2 siRNA (m): sc-29743,  $\beta$ -Arrestin-2 siRNA (r): sc-63299,  $\beta$ -Arrestin-2 shRNA Plasmid (h): sc-29208-SH,  $\beta$ -Arrestin-2 shRNA Plasmid (m): sc-29743-SH,  $\beta$ -Arrestin-2 shRNA Plasmid (r): sc-63299-SH,  $\beta$ -Arrestin-2 shRNA (h) Lentiviral Particles: sc-29208-V,  $\beta$ -Arrestin-2 shRNA (m) Lentiviral Particles: sc-29743-V and  $\beta$ -Arrestin-2 shRNA (r) Lentiviral Particles: sc-63299-V.

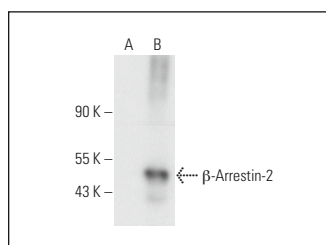
Molecular Weight of  $\beta$ -Arrestin-2: 55 kDa.

Positive Controls:  $\beta$ -Arrestin-2 (h): 293T Lysate: sc-116903.

## 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™ 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). 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® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



$\beta$ -Arrestin-2 (F-2): sc-514791. Western blot analysis of  $\beta$ -Arrestin-2 expression in non-transfected: sc-117752 (A) and human  $\beta$ -Arrestin-2 transfected: sc-116903 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS


- Wei, Y., et al. 2020. Pyridoxine induces glutathione synthesis via PKM2-mediated Nrf2 transactivation and confers neuroprotection. *Nat. Commun.* 11: 941.
- Fang, Y., et al. 2021. Opposing functions of  $\beta$ -Arrestin 1 and 2 in Parkinson's disease via microglia inflammation and Npr13. *Cell Death Differ.* 28: 1822-1836.
- Sun, Y., et al. 2024.  $\beta$ -Arrestin-2 is indispensable for the antidepressant effects of fluoxetine via inhibiting astrocytic pyroptosis in chronic mild stress mouse model for depression. *Eur. J. Pharmacol.* 976: 176693.

## 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.



See  **$\beta$ -Arrestin-2 (B-4): sc-365445** for  $\beta$ -Arrestin-2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.