

# R7BP (W-16): sc-50173

## BACKGROUND

The regulators of G protein signaling (RGS proteins) bind directly to the G protein  $\alpha$  ( $G_{\alpha}$ ) subunits in brain and other tissues to determine the strength, duration and fidelity of neurotransmitter receptor signaling. They also regulate the kinetics of the G protein signaling. Members of the R7 subfamily, part of the RGS family, bind to  $G_{\beta 5}$  (R7- $G_{\beta 5}$ ) and shuttle between the plasma membrane and the nucleus with assistance from a shuttle protein, R7BP, in neurons. R7BP binds directly to R7- $G_{\beta 5}$ , and the protein complex becomes tethered to the plasma membrane by the addition of palmitate, a lipid, onto R7BP. Removal of palmitate results in the translocation of the R7BP-R7- $G_{\beta 5}$  complex to the nucleus, presumably for nontraditional signaling functions.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: R7BP (human) mapping to 5q12.3; R7bp (mouse) mapping to 13 D1.

## SOURCE

R7BP (W-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of R7BP of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-50173 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

R7BP (W-16) is recommended for detection of R7BP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

R7BP (W-16) is also recommended for detection of R7BP in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for R7BP siRNA (h): sc-61431, R7BP siRNA (m): sc-61432, R7BP shRNA Plasmid (h): sc-61431-SH, R7BP shRNA Plasmid (m): sc-61432-SH, R7BP shRNA (h) Lentiviral Particles: sc-61431-V and R7BP shRNA (m) Lentiviral Particles: sc-61432-V.

Molecular Weight of R7BP: 30 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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) or our catalog for detailed protocols and support products.