SANTA CRUZ BIOTECHNOLOGY, INC.

R7BP (FL-246): sc-99235

BACKGROUND

The regulators of G protein signaling (RGS proteins) bind directly to the G protein α (G_α) 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: RGS7BP (human) mapping to 5q12.3; Rgs7bp (mouse) mapping to 13 D1.

SOURCE

R7BP (FL-246) is a rabbit polyclonal antibody raised against amino acids 12-257 mapping at the C-terminus of R7BP of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

R7BP (FL-246) 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), immunoprecipitation [1-2 µg per 100-500 µg 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).

R7BP (FL-246) is also recommended for detection of R7BP in additional species, including canine, bovine and porcine.

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 goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. 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 or our catalog for detailed protocols and support products.