SANTA CRUZ BIOTECHNOLOGY, INC.

AGS3 (R-20): sc-16395

BACKGROUND

Activators of G-protein Signaling (AGS) are non-G protein-coupled receptor (GPCR)-ligand-induced initiators of heterotrimeric G-protein signaling pathways that function either downstream of GPCR effecters or at the level of heterotrimeric G-proteins. AGS3 is a $G_{\alpha i}$-binding protein that is capable of displacing $G_{\beta \gamma}$ and associating with G_{α}-GDP, thereby stabilizing the GDP-bound conformation of G_{α}. AGS3 localizes to the cytoplasm and is expressed in rat brain, PC12 cells, NG108-15 cells, and DDT(1)-MF2 smooth muscle cells. In rat, a 227-amino acid long form of AGS3, that contains 7 TPR (tetratricopeptide repeat) domains which target proteins to subcellular regions of neuroblasts, is more prevalent in adult rat brain, whereas the 166-amino acid short form of AGS3 is more prevalent in adult rat heart.

REFERENCES

1. Takesono, A., et al. 1999. Receptor-independent activators of heterotrimeric G-protein signaling pathways. J. Biol. Chem. 274: 33202-33205.
2. Natochin, M., et al. 2000. AGS3 inhibits GDP dissociation from G_{α} subunits of the G_i family and rhodopsin-dependent activation of transducin. J. Biol. Chem. 275: 40981-40985.
3. De Vries, L., et al. 2000. Activator of G protein signaling 3 is a guanine dissociation inhibitor for $G_{\alpha i}$ subunits. Proc. Natl. Acad. Sci. USA 97: 14364-14369.
4. Pizzinat, N., et al. 2001. Identification of a truncated form of the G-protein regulator AGS3 in heart that lacks the tetratricopeptide repeat domains. J. Biol. Chem. 276: 16601-16610.
5. Bernard, M.L., et al. 2001. Selective interaction of AGS3 with G-proteins and the influence of AGS3 on the activation state of G-proteins. J. Biol. Chem. 276: 1585-1593.
6. Cismowski, M.J., et al. 2001. Receptor-independent activators of heterotrimeric G-proteins. Life Sci. 68: 2301-2308.

CHROMOSOMAL LOCATION

Genetic locus: Gpsm1 (mouse) mapping to 2 A3.

SOURCE

AGS3 (R-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of AGS3 of rat origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-16395 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

AGS3 (R-20) is recommended for detection of AGS3 of mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (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 AGS3 siRNA (m): sc-41693, AGS3 shRNA Plasmid (m): sc-41693-SH and AGS3 shRNA (m) Lentiviral Particles: sc-41693-V.

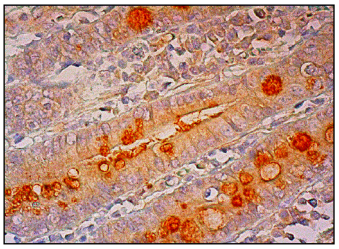
Molecular Weight of AGS3: 75 kDa.

Positive Controls: rat brain extract: sc-2392 or rat cerebellum extract: sc-2398.

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



AGS3 (R-20): sc-16395. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.