

# AGS3 (A-20): sc-16393

## 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 effectors 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  $G_{\alpha}$ -GDP, thereby stabilizing the GDP-bound conformation of  $G_{\alpha}$ . AGS3 localizes to the cytoplasm and is expressed in rat brain, PC12 cells, NG108-15 cells, and DDT<sub>1</sub>-MF2 smooth muscle cells. In rat, a 227-amino acid long form of AGS3, that contains seven TPR (tetra-ricopeptide 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  $G_{\alpha}$  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., Takesono, A. and Lanier, S.M. 2001. Identification of a truncated form of the G-protein regulator AGS3 in heart that lacks the tetra-ricopeptide 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 (human) mapping to 9q34.3, GPSM2 (human) mapping to 1p13.3; Gpsm1 (mouse) mapping to 2 A3, Gpsm2 (mouse) mapping to 3 F3.

## SOURCE

AGS3 (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AGS3 of rat origin.

## 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-16393 P, (100  $\mu$ g 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 (A-20) is recommended for detection of AGS3 and LGN of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); may cross-react with TTC28.

AGS3 (A-20) is also recommended for detection of AGS3 and LGN in additional species, including equine, canine, bovine, porcine and avian.

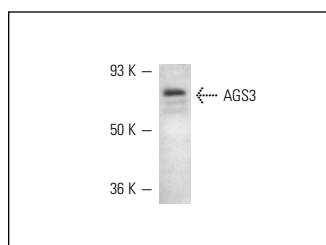
Molecular Weight of AGS3: 75 kDa.

Positive Controls: rat brain extract: sc-2392 and PC-12 cell lysate: sc-2250.

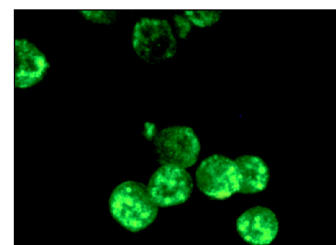
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



AGS3 (A-20): sc-16393. Western blot analysis of AGS3 expression in rat brain tissue extract.



AGS3 (A-20): sc-16393. Immunofluorescence staining of methanol-fixed PC-12 cells showing cytoplasmic localization.

## 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.

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Try **AGS3 (G-2): sc-271721** or **AGS3 (12): sc-136482**, our highly recommended monoclonal alternatives to AGS3 (A-20).