

AGS3 (G-2): sc-271721



The Power to Question

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_{α_i} -binding protein that is capable of displacing $G_{\beta\gamma}$ and associating with G_{α_i} -GDP, thereby stabilizing the GDP-bound conformation of G_{α_i} . AGS3 localizes to the cytoplasm and is expressed in rat brain, PC12 cells, NG108-15 cells and DDT₁-MF2 smooth muscle cells. In rat, a 227 amino acid long form of AGS3, that contains seven TPR (tetra-tricopeptide 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_i} 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_{α_i} subunits. *Proc. Natl. Acad. Sci. USA* 97: 14364-14369.
4. 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; Gpsm1 (mouse) mapping to 2 A3.

SOURCE

AGS3 (G-2) is a mouse monoclonal antibody raised against amino acids 346-470 mapping within an internal region of AGS3 of rat origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AGS3 (G-2) is available conjugated to agarose (sc-271721 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271721 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271721 PE), fluorescein (sc-271721 FITC), Alexa Fluor[®] 488 (sc-271721 AF488), Alexa Fluor[®] 546 (sc-271721 AF546), Alexa Fluor[®] 594 (sc-271721 AF594) or Alexa Fluor[®] 647 (sc-271721 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271721 AF680) or Alexa Fluor[®] 790 (sc-271721 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

AGS3 (G-2) is recommended for detection of AGS3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 AGS3 siRNA (h): sc-44441, AGS3 siRNA (m): sc-41693, AGS3 shRNA Plasmid (h): sc-44441-SH, AGS3 shRNA Plasmid (m): sc-41693-SH, AGS3 shRNA (h) Lentiviral Particles: sc-44441-V and AGS3 shRNA (m) Lentiviral Particles: sc-41693-V.

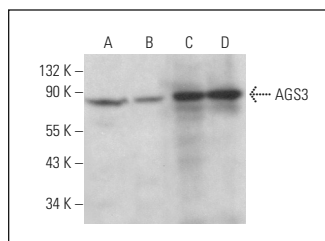
Molecular Weight of AGS3: 75 kDa.

Positive Controls: AGS3 (m2): 293T Lysate: sc-126400, rat brain extract: sc-2392 or rat cerebellum extract: sc-2398.

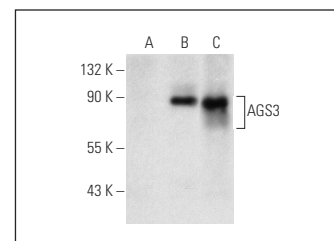
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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



AGS3 (G-2): sc-271721. Western blot analysis of AGS3 expression in NIH/3T3 (A) and C6 (B) whole cell lysates and rat cerebellum (C) and rat brain (D) tissue extracts.



AGS3 (G-2): sc-271721. Western blot analysis of AGS3 expression in non-transfected: sc-117752 (A) and mouse AGS3 transfected: sc-126400 (B) 293T whole cell lysates and rat brain tissue extract (C).

SELECT PRODUCT CITATIONS

1. Nie, Z.W., et al. 2020. AGS3-dependent TGN-membrane trafficking is essential for compaction in mouse embryos. *J. Cell Sci.* 133: jcs243238.
2. Zhang, Y., et al. 2021. Knockdown of GPSM1 inhibits the proliferation and promotes the apoptosis of B-cell acute lymphoblastic leukemia cells by suppressing the ADCY6-RAPGEF3-JNK signaling pathway. *Pathol. Oncol. Res.* 27: 643376.

RESEARCH USE

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