SANTA CRUZ BIOTECHNOLOGY, INC.

AGS3 (12): sc-136482

SANTA CRUZ BIOTECHNOLOGY

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 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 seven 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., Cismowski, M.J., Ribas, C., Bernard, M., Chung, P., Hazard, S.R., Duzic, E. and Lanier, S.M. 1999. Receptor-independent activators of heterotrimeric G protein signaling pathways. J. Biol. Chem. 274: 33202-33205.
2. Natochin, M., Lester, B., Peterson, Y. K., Bernard, M.L., Lanier, S.M. and Artemyev, N.O. 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., Fischer, T., Tronchere, H., Brothers, G.M., Strockbine, B., Siderovski, D.P. and Farquhar, M.G. 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. Cismowski, M.J., Takesono, A., Bernard, M.L., Duzic, E. and Lanier, S.M. 2001. Receptor-independent activators of heterotrimeric G proteins. Life Sci. 68: 2301-2308.
5. Bernard, M.L., Peterson, Y.K., Chung, P., Jourdan, J. and Lanier, S.M. 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. 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 tetratricopeptide repeat domains. J. Biol. Chem. 276: 16601-16610.

CHROMOSOMAL LOCATION

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

SOURCE

AGS3 (12) is a mouse monoclonal antibody raised against amino acids 351-467 of AGS3 of rat origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

AGS3 (12) is recommended for detection of AGS3 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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.

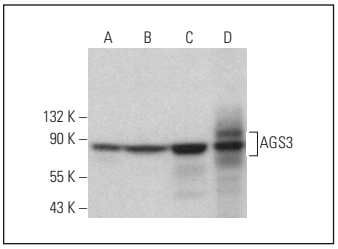
Molecular Weight of AGS3: 75 kDa.

Positive Controls: F9 cell lysate: sc-2245, rat brain extract: sc-2392 or rat cerebellum extract: sc-2398.

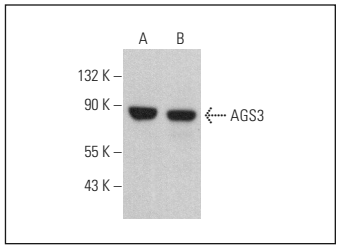
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

DATA



AGS3 (12): sc-136482. Western blot analysis of AGS3 expression in EOC 20 (**A**), F9 (**B**) and C6 (**C**) whole cell lysates and mouse brain tissue extract (**D**).



AGS3 (12): sc-136482. Western blot analysis of AGS3 expression in Neuro-2A (**A**) and A-10 (**B**) whole cell lysates.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.