SANTA CRUZ BIOTECHNOLOGY, INC.

ALG-2 (AA8): sc-101209

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

An increased intracellular Ca^{2+} concentration induces apoptotic cell death. Transiently elevated Ca^{2+} concentrations are required for glucocorticoid-mediated and T cell receptor-mediated pathways, leading to T cell apoptosis. ALG-2 (for apoptosis-linked gene 2) is a Ca^{2+} -binding protein that participates in regulatory events occuring late in the apoptotic program and where several death signals converge. ALG-2 is a protein expressed in normal brain, and to a greater extent in ischemic brain. The ALG-2 protein contains five EF-hand-like motifs and shares homology with members of the penta EF-hand family, which includes Calpain small subunits sorcin and Grancalcin.

REFERENCES

1. McConkey, D.J., et al. 1989. Calcium-dependent killing of immature thymocytes by stimulation via the CD3/T cell receptor complex. J. Immunol. 143: 1801-1806.
2. McConkey, D.J., et al. 1989. Glucocorticoids activate a suicide process in thymocytes through an elevation of cytosolic Ca^{2+} concentration. Arch. Biochem. Biophys. 269: 365-370.
3. Nicotera, P., et al. 1990. The role of Ca^{2+} in cell killing. Chem. Res. Toxicol. 3: 484-494.
4. Vito, P., et al. 1996. Interfering with apoptosis: Ca^{2+} -binding protein ALG-2 and Alzheimer's disease gene ALG-3. Science 271: 521-525.
5. D'Adamio, L., et al. 1997. Functional cloning of genes involved in T cell receptor-induced programmed cell death. Semin. Immunol. 9: 17-23.
6. Maki, M., et al. 1997. A growing family of the Ca^{2+}-binding proteins with five EF-hand motifs. Biochem. J. 328: 718-720.
7. Venn, M.K. and Conway, E.L. 1998. Localization of mRNA for the apoptosis-linked gene ALG-2 in young and aged rat brain. Neuroreport 9: 1981-1985.
8. Li, W., et al. 2000. Increased expression of apoptosis-linked gene 2 (ALG-2) in the rat brain after temporary focal cerebral ischemia. Neuroscience 96: 161-168.

CHROMOSOMAL LOCATION

Genetic locus: PDCD6 (human) mapping to 5p15.33; Pdcd6 (mouse) mapping to 13 C1.

SOURCE

ALG-2 (AA8) is a mouse monoclonal antibody raised against recombinant ALG-2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

ALG-2 (AA8) is recommended for detection of ALG-2 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).

Suitable for use as control antibody for ALG-2 siRNA (h): sc-106841, ALG-2 siRNA (m): sc-141006, ALG-2 shRNA Plasmid (h): sc-106841-SH, ALG-2 shRNA Plasmid (m): sc-141006-SH, ALG-2 shRNA (h) Lentiviral Particles: sc-106841-V and ALG-2 shRNA (m) Lentiviral Particles: sc-141006-V.

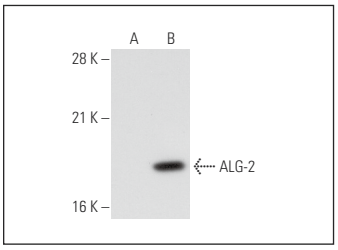
Molecular Weight of ALG-2: 22 kDa.

Positive Controls: ALG-2 (h2): 293T Lysate: sc-112988 or HeLa whole cell lysate: sc-2200.

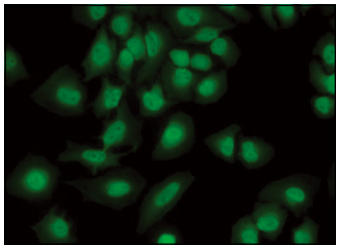
RECOMMENDED SUPPORT REAGENTS

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, 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



ALG-2 (AA8): sc-101209. Western blot analysis of ALG-2 expression in non-transfected: sc-117752 (**A**) and human ALG-2 transfected: sc-112988 (**B**) 293T whole cell lysates.



ALG-2 (AA8): sc-101209. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization.

RESEARCH USE

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

PROTOCOLS

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