SANTA CRUZ BIOTECHNOLOGY, INC.

ALG-2 (h3): 293T Lysate: sc-114742



BACKGROUND

An increased intracellular Ca²⁺ concentration induces apoptotic cell death. Transiently elevated Ca²⁺ concentrations are required for glucocorticoidmediated and T cell receptor-mediated pathways, leading to T cell apoptosis. ALG-2 (for apoptosis-linked gene 2) is a Ca²⁺-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-handlike motifs and shares homology with members of the penta EF-hand family, which includes Calpain small subunits sorcin and Grancalcin.

REFERENCES

- McConkey, D.J., Hartzell, P., Amador-Perez, J.F., Orrenius, S. and Jondal, M. 1989. Calcium-dependent killing of immature thymocytes by stimulation via the CD3/T cell receptor complex. J. Immunol. 143: 1801-1806.
- McConkey, D.J., Nicotera, P., Hartzell, P., Bellomo, G., Wyllie, A.H. and Orrenius, S. 1989. Glucocorticoids activate a suicide process in thymocytes through an elevation of cytosolic Ca²⁺ concentration. Arch. Biochem. Biophys. 269: 365-370.
- 3. Nicotera, P., Bellomo, G. and Orrenius, S. 1990. The role of Ca²⁺ in cell killing. Chem. Res. Toxicol. 3: 484-494.
- Vito, P., Lacana, E. and D'Adamio, L. 1996. Interfering with apoptosis: Ca²⁺-binding protein ALG-2 and Alzheimer's disease gene ALG-3. Science 271: 521-525.
- D'Adamio, L., Lacana, E. and Vito, P. 1997. Functional cloning of genes involved in T-cell receptor-induced programmed cell death. Semin. Immunol. 9: 17-23.
- Maki, M., Narayana, S.V. and Hitomi, K. 1997. A growing family of the Ca²⁺-binding proteins with five EF-hand motifs. Biochem. J. 328: 718-720.
- Venn, M.K. and Conway, E.L. 1998. Localization of mRNA for the apoptosislinked gene ALG-2 in young and aged rat brain. Neuroreport 9: 1981-1985.
- Li, W., Jin, K., Nagayama, T., He, X., Chang, J., Minami, M., Graham, S.H., Simon, R.P. and Greenberg, D.A. 2000. Increased expression of apoptosislinked gene 2 (ALG2) in the rat brain after temporary focal cerebral ischemia. Neuroscience 96: 161-168.
- Tarabykina, S., Moller, A.L., Durussel, I., Cox, J. and Berchtold, M.W. 2000. Two forms of the apoptosis-linked protein ALG-2 with different Ca²⁺ affinities and target recognition. J. Biol. Chem. 275: 10514-10518.

CHROMOSOMAL LOCATION

Genetic locus: PDCD6 (human) mapping to 5p15.33.

PRODUCT

ALG-2 (h3): 293T Lysate represents a lysate of human ALG-2 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

ALG-2 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive ALG-2 antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ALG-2 (H-11): sc-376950 is recommended as a positive control antibody for Western Blot analysis of enhanced human ALG-2 expression in ALG-2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



ALG-2 (H-11): sc-376950. Western blot analysis of ALG-2 expression in non-transfected: sc-117752 (A) and human ALG-2 transfected: sc-114742 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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