

ALG-2 (H-11): sc-376950

BACKGROUND

An increased intracellular Ca²⁺ concentration induces apoptotic cell death. Transiently elevated Ca²⁺ 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 Ca²⁺-binding protein that participates in regulatory events occurring 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 Ca²⁺ concentration. *Arch. Biochem. Biophys.* 269: 365-370.
3. Nicotera, P., et al. 1990. The role of Ca²⁺ in cell killing. *Chem. Res. Toxicol.* 3: 484-494.
4. Vito, P., et al. 1996. Interfering with apoptosis: Ca²⁺-binding protein ALG-2 and Alzheimer's disease gene ALG-3. *Science* 271: 521-525.
5. D'Adamo, 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 Ca²⁺-binding proteins with five EF-hand motifs. *Biochem. J.* 328: 718-720.

CHROMOSOMAL LOCATION

Genetic locus: PDCD6 (human) mapping to 5p15.33; Pdc6 (mouse) mapping to 13 C1.

SOURCE

ALG-2 (H-11) is a mouse monoclonal antibody raised against amino acids 1-191 representing full length ALG-2 of human origin.

PRODUCT

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

ALG-2 (H-11) is available conjugated to agarose (sc-376950 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376950 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376950 PE), fluorescein (sc-376950 FITC), Alexa Fluor[®] 488 (sc-376950 AF488), Alexa Fluor[®] 546 (sc-376950 AF546), Alexa Fluor[®] 594 (sc-376950 AF594) or Alexa Fluor[®] 647 (sc-376950 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376950 AF680) or Alexa Fluor[®] 790 (sc-376950 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

ALG-2 (H-11) is recommended for detection of ALG-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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.

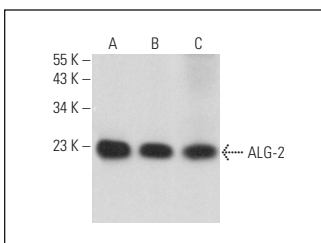
Molecular Weight of ALG-2: 22 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Hep G2 cell lysate: sc-2227 or mouse brain extract: sc-2253.

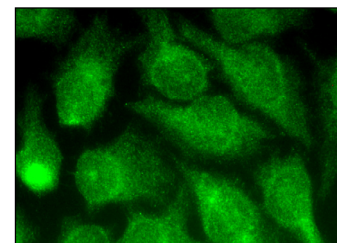
RECOMMENDED SUPPORT REAGENTS

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 (H-11): sc-376950. Western blot analysis of ALG-2 expression in Jurkat (A) and Hep G2 (B) whole cell lysates and mouse brain tissue extract (C).



ALG-2 (H-11): sc-376950. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

SELECT PRODUCT CITATIONS

1. Cho, H.J. and Mook-Jung, I. 2020. Amyloid β regulates ER exit sites formation through O-GlcNAcylation triggered by disrupted calcium homeostasis. *Biol. Cell* 112: 439-451.

STORAGE

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

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