SANTA CRUZ BIOTECHNOLOGY, INC.

DRAK2 (C-2): sc-398324

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

DAP (death associated protein) kinase and ZIP kinase are members of a novel protein kinase family, the members of which have the capacity to mediate apoptosis through their catalytic activities. DAP kinase contains a "death domain" and has been shown to mediate γ interferon-induced apoptosis. The introduction of DAP kinase into highly metastatic carcinoma clones lacking DAP kinase expression was shown to result in the suppression of metastasis, thus linking suppression of apoptosis to metastasis. ZIP kinase contains a leucine zipper domain, which is necessary for homodimerization and for interaction with other leucine zipper proteins. ZIP kinase dimerizes with ATF-4, an ATF/CREB transcription factor family member that contains a leucine zipper. DRAK1 (DAP kinase-related apoptosis-inducing protein kinase 1) and DRAK2 are DAP kinase related proteins. DRAK1 and DRAK2 are localized to the nucleus, and overexpression of both DRAK proteins in NIH/3T3 cells induces morphological changes associated with apoptosis.

REFERENCES

1. Hai, T.W., et al. 1989. Transcription factor ATF cDNA clones: an extensive family of leucine zipper proteins able to selectively form DNA-binding heterodimers. Genes Dev. 3: 2083-2090.
2. Deiss, L.P., et al. 1995. Identification of a novel serine/threonine kinase and a novel 15 kD protein as potential mediators of the γ interferon-induced cell death. Genes Dev. 9: 15-30.
3. Sakagami, H., et al. 1997. Molecular cloning and developmental expression of a rat homologue of death-associated protein kinase in the nervous system. Brain Res. Mol. Brain Res. 52: 249-256.
4. Inbal, B., et al. 1997. DAP kinase links the control of apoptosis to metastasis. Nature 390: 180-184.

CHROMOSOMAL LOCATION

Genetic locus: STK17B (human) mapping to 2q32.3; Stk17b (mouse) mapping to 1 C1.1.

SOURCE

DRAK2 (C-2) is a mouse monoclonal antibody raised against amino acids 256-372 mapping at the C-terminus of DRAK2 of human 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.

DRAK2 (C-2) is available conjugated to agarose (sc-398324 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398324 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398324 PE), fluorescein (sc-398324 FITC), Alexa Fluor® 488 (sc-398324 AF488), Alexa Fluor® 546 (sc-398324 AF546), Alexa Fluor® 594 (sc-398324 AF594) or Alexa Fluor® 647 (sc-398324 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398324 AF680) or Alexa Fluor® 790 (sc-398324 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

DRAK2 (C-2) is recommended for detection of DRAK2 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), immunohistochemistry (including paraffin-embedded sections) (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 DRAK2 siRNA (h): sc-38981, DRAK2 siRNA (m): sc-38982, DRAK2 shRNA Plasmid (h): sc-38981-SH, DRAK2 shRNA Plasmid (m): sc-38982-SH, DRAK2 shRNA (h) Lentiviral Particles: sc-38981-V and DRAK2 shRNA (m) Lentiviral Particles: sc-38982-V.

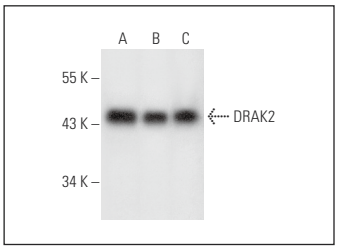
Molecular Weight of DRAK2: 42 kDa.

Positive Controls: Ramos nuclear extract: sc-2153, Jurkat nuclear extract: sc-2132 or Jurkat whole cell lysate: sc-2204.

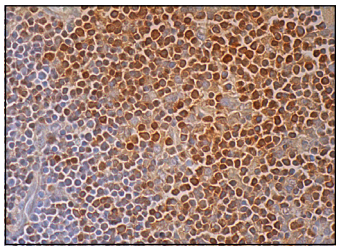
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



DRAK2 (C-2): sc-398324. Western blot analysis of DRAK2 expression in Jurkat whole cell lysate (**A**) and Jurkat (**B**) and Ramos (**C**) nuclear extracts.



DRAK2 (C-2): sc-398324. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thymus tissue showing nuclear and cytoplasmic staining of medullary cells and cytoplasmic staining of subset of cortical cells.

STORAGE

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

RESEARCH USE

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