

ZIP-kinase (C-3): sc-514223

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. Overexpression of ZIP kinase was shown to result in morphological changes associated with apoptosis in NIH/3T3 cells.

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.

CHROMOSOMAL LOCATION

Genetic locus: DAPK3 (human) mapping to 19p13.3; Dapk3 (mouse) mapping to 10 C1.

SOURCE

ZIP-kinase (C-3) is a mouse monoclonal antibody raised against amino acids 334-454 mapping at the C-terminus of ZIP-kinase of human origin.

PRODUCT

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

ZIP-kinase (C-3) is available conjugated to agarose (sc-514223 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514223 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514223 PE), fluorescein (sc-514223 FITC), Alexa Fluor® 488 (sc-514223 AF488), Alexa Fluor® 546 (sc-514223 AF546), Alexa Fluor® 594 (sc-514223 AF594) or Alexa Fluor® 647 (sc-514223 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514223 AF680) or Alexa Fluor® 790 (sc-514223 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

ZIP-kinase (C-3) is recommended for detection of ZIP-kinase of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 ZIP-kinase siRNA (h): sc-38983, ZIP-kinase siRNA (m): sc-38984, ZIP-kinase shRNA Plasmid (h): sc-38983-SH, ZIP-kinase shRNA Plasmid (m): sc-38984-SH, ZIP-kinase shRNA (h) Lentiviral Particles: sc-38983-V and ZIP-kinase shRNA (m) Lentiviral Particles: sc-38984-V.

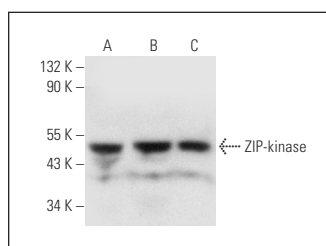
Molecular Weight of ZIP-kinase: 52 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

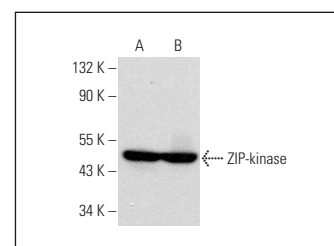
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



ZIP-kinase (C-3): sc-514223. Western blot analysis of ZIP-kinase expression in Hep G2 (A), HeLa (B) and Jurkat (C) whole cell lysates.



ZIP-kinase (C-3): sc-514223. Western blot analysis of ZIP-kinase expression in Hep G2 (A) and HUVEC-C (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Noulet, F. and Merat, R. 2022. Inhibition of the DAPKs-L13a axis prevents a GAIT-like motif-mediated HuR insufficiency in melanoma cells. *Biochem. Biophys. Res. Commun.* 626: 21-29.

RESEARCH USE

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