SANTA CRUZ BIOTECHNOLOGY, INC.

Mig-6 (D-1): sc-137154

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Mitogen-inducible gene 6 protein (Mig-6), also designated Gene 33 or RALT, belongs to the Mig-6 family. The gene encoding for Mig-6 maps to chromosome 1p36.23. Mig-6 is a cytoplasmic protein acting as a feedback inhibitor of ErbB-2 mitogenic function and can suppress ErbB-2 oncogenic activity. The expression of Mig-6 is upregulated with cell growth. Mig-6 binds to the epidermal growth factor receptor (EGFR) upon EGF stimulation and is considered a negative feedback regulator of EGFR and a potential tumor suppressor. Mig-6 induces transcriptional activation of NFκB by binding to its inhibitor IκBα. It enables the cell to respond persistently to chronic stress. Mig-6 mRNA levels increase in response to stress such as diabetic nephropathy, vasoactive peptides or mechanical strain. Mig-6 is expressed in liver, placenta and lung.

CHROMOSOMAL LOCATION

Genetic locus: ERRFI1 (human) mapping to 1p36.23; Errfi1 (mouse) mapping to 4 E2.

SOURCE

Mig-6 (D-1) is a mouse monoclonal antibody raised against amino acids 156-280 mapping within an internal region of Mig-6 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.

Mig-6 (D-1) is available conjugated to agarose (sc-137154 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137154 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137154 PE), fluorescein (sc-137154 FITC), Alexa Fluor® 488 (sc-137154 AF488), Alexa Fluor® 546 (sc-137154 AF546), Alexa Fluor® 594 (sc-137154 AF594) or Alexa Fluor® 647 (sc-137154 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137154 AF680) or Alexa Fluor® 790 (sc-137154 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Mig-6 (D-1) is recommended for detection of Mig-6 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 Mig-6 siRNA (h): sc-45704, Mig-6 siRNA (m): sc-45705, Mig-6 shRNA Plasmid (h): sc-45704-SH, Mig-6 shRNA Plasmid (m): sc-45705-SH, Mig-6 shRNA (h) Lentiviral Particles: sc-45704-V and Mig-6 shRNA (m) Lentiviral Particles: sc-45705-V.

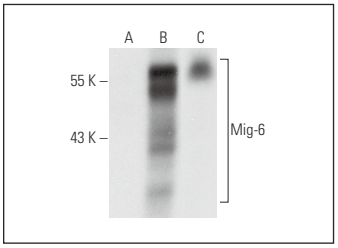
Molecular Weight of Mig-6: 53 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, A549 cell lysate: sc-2413 or Mig-6 (m): 293T Lysate: sc-125619.

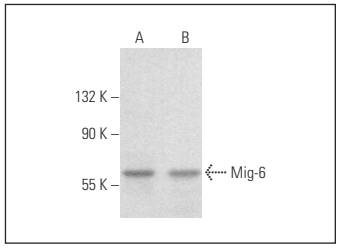
STORAGE

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

DATA



Mig-6 (D-1): sc-137154. Western blot analysis of Mig-6 expression in non-transfected 293T: sc-117752 (**A**), mouse Mig-6 transfected 293T: sc-125619 (**B**) and A549 (**C**) whole cell lysates.



Mig-6 (D-1): sc-137154. Western blot analysis of Mig-6 expression in NIH/3T3 whole cell lysate (**A**) and rat brain tissue extract (**B**).

SELECT PRODUCT CITATIONS

1. Liu, N., et al. 2012. Chk1 phosphorylates the tumour suppressor Mig-6, regulating the activation of EGF signalling. EMBO J. 31: 2365-2377.
2. Sun, M., et al. 2016. Type I γ phosphatidylinositol phosphate 5-kinase i5 controls the ubiquitination and degradation of the tumor suppressor mitogen-inducible gene 6. J. Biol. Chem. 291: 21461-21473.
3. Shangguan, Y., et al. 2017. Glucocorticoid mediates prenatal caffeine exposure-induced endochondral ossification retardation and its molecular mechanism in female fetal rats. Cell Death Dis. 8: e3157.
4. Mancini, M., et al. 2021. Generation and characterization of a new preclinical mouse model of EGFR-driven lung cancer with MET-induced osimertinib resistance. Cancers 13: 3441.
5. Bosse, K.R., et al. 2022. Serial profiling of circulating tumor DNA identifies dynamic evolution of clinically actionable genomic alterations in hgh-risk neuroblastoma. Cancer Discov. 12: 2800-2819.
6. Deng, Z., et al. 2023. Temporal transcriptome features identify early skeletal commitment during human epiphysis development at single-cell resolution. iScience 26: 107200.
7. Chen, Y.C., et al. 2023. Glucolipotoxic stress-induced Mig-6 desensitizes EGFR signaling and promotes pancreatic β cell death. Metabolites 13: 627.
8. Zhao, H. and Mao, H. 2024. ERRFI1 exacerbates hepatic ischemia reperfusion injury by promoting hepatocyte apoptosis and ferroptosis in a GRB2-dependent manner. Mol. Med. 30: 82.

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.