

Mig-6 (D-12): sc-137155

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 NF κ B by binding to its inhibitor I κ B α . 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.

REFERENCES

1. Wick, M., et al. 1995. Identification of a novel mitogen-inducible gene (Mig-6): regulation during G₁ progression and differentiation. *Exp. Cell Res.* 219: 527-535.
2. Makinje, A., et al. 2000. Gene 33/Mig-6, a transcriptionally inducible adapter protein that binds GTP-Cdc42 and activates SAPK/JNK. A potential marker transcript for chronic pathologic conditions, such as diabetic nephropathy. Possible role in the response to persistent stress. *J. Biol. Chem.* 275: 17838-17847.
3. Fiorentino, L., et al. 2000. Inhibition of ErbB-2 mitogenic and transforming activity by RALT, a mitogen-induced signal transducer which binds to the ErbB-2 kinase domain. *Mol. Cell. Biol.* 20: 7735-7750.
4. Hackel, P.O., et al. 2001. Mig-6 is a negative regulator of the epidermal growth factor receptor signal. *Biol. Chem.* 382: 1649-1662.
5. Tsunoda, T., et al. 2002. A novel mechanism of nuclear factor κ B activation through the binding between inhibitor of nuclear factor- κ B α and the processed NH₂-terminal region of Mig-6. *Cancer Res.* 62: 5668-5671.
6. Keeton, A.B., et al. 2004 Regulation of Gene33 expression by Insulin requires MEK-ERK activation. *Biochim. Biophys. Acta* 1679: 248-255.

CHROMOSOMAL LOCATION

Genetic locus: ERRF1 (human) mapping to 1p36.23.

SOURCE

Mig-6 (D-12) 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 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Mig-6 (D-12) is recommended for detection of Mig-6 of 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 Mig-6 siRNA (h): sc-45704, Mig-6 shRNA Plasmid (h): sc-45704-SH and Mig-6 shRNA (h) Lentiviral Particles: sc-45704-V.

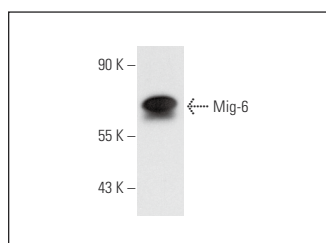
Molecular Weight of Mig-6: 53 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, A549 cell lysate: sc-2413 or Hep G2 cell lysate: sc-2227.

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



Mig-6 (D-12): sc-137155. Western blot analysis of Mig-6 expression in A549 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Walsh, A.M. and Lazzara, M.J. 2013. Regulation of EGFR trafficking and cell signaling by Sprouty2 and MIG6 in lung cancer cells. *J. Cell Sci.* 126: 4339.

RESEARCH USE

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



See **Mig-6 (D-1): sc-137154** for Mig-6 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.