

Mig-6 (E-17): sc-46165

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

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- Makkinje, 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.
- 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.
- Hackel, P.O., et al. 2001. Mig-6 is a negative regulator of the epidermal growth factor receptor signal. *Biol. Chem.* 382: 1649-1662.
- Tsunoda, T., et al. 2002. A novel mechanism of NF κ B activation through the binding between inhibitor of NF κ B α and the processed NH₂-terminal region of Mig-6. *Cancer Res.* 62: 5668-5671.
- 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; Errf1 (mouse) mapping to 4 E2.

SOURCE

Mig-6 (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Mig-6 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-46165 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Mig-6 (E-17) is recommended for detection of Mig-6 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, 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).

Mig-6 (E-17) is also recommended for detection of Mig-6 in additional species, including canine.

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.

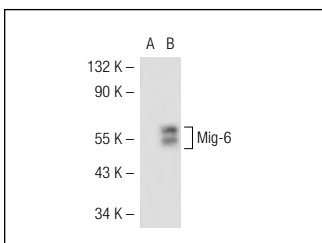
Molecular Weight of Mig-6: 53 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Mig-6 (E-17): sc-46165. Western blot analysis of Mig-6 expression in non-transfected: sc-117752 (A) and mouse Mig-6 transfected: sc-125619 (B) 293T whole cell lysates.

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.