

MDMX (A-11): sc-374147

BACKGROUND

The MDM2 protein is the primary regulator of p53 protein stability. MDMX is an MDM2-related protein that inhibits MDM2-mediated degradation of p53 via distinct associations with MDM2. The gene that encodes MDMX (also designated MDM4) is a target for amplification in malignant gliomas. ARF interacts with MDMX to sequester MDMX within the nucleolus. This sequestration of MDMX by ARF results in an increase in p53 transactivation. In addition, expression of MDMX can reverse MDM2-targeted degradation of p53 while maintaining suppression of p53 transactivation. Like MDM2, MDMX also binds p73 and stabilizes the level of p73. Therefore, in striking contrast to p53, the half-life of p73 is increased by binding to MDM2.

REFERENCES

1. Riemenschneider, M.J., et al. 1999. Amplification and overexpression of the MDM4 (MDMX) gene from 1q32 in a subset of malignant gliomas without TP53 mutation or MDM2 amplification. *Cancer Res.* 59: 6091-6096.
2. Ongkeko, W.M., et al. 1999. MDM2 and MDMX bind and stabilize the p53-related protein p73. *Curr. Biol.* 9: 829-832.

CHROMOSOMAL LOCATION

Genetic locus: MDM4 (human) mapping to 1q32.1; Mdm4 (mouse) mapping to 1 E4.

SOURCE

MDMX (A-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 163-199 an internal region of MDMX of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-374147 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

MDMX (A-11) is recommended for detection of MDMX 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 MDMX siRNA (h): sc-37448, MDMX siRNA (m): sc-37449, MDMX shRNA Plasmid (h): sc-37448-SH, MDMX shRNA Plasmid (m): sc-37449-SH, MDMX shRNA (h) Lentiviral Particles: sc-37448-V and MDMX shRNA (m) Lentiviral Particles: sc-37449-V.

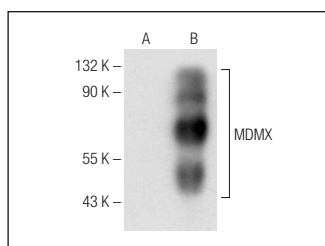
Molecular Weight of MDMX: 80 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, MDMX (h): 293T Lysate: sc-111488 or Hep G2 cell lysate: sc-2227.

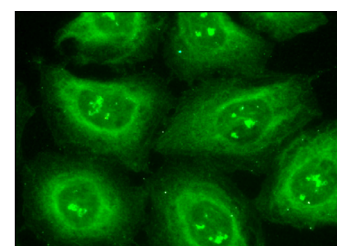
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-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.

DATA



MDMX (A-11): sc-374147. Western blot analysis of MDMX expression in non-transfected: sc-117752 (A) and human MDMX transfected: sc-111488 (B) 293T whole cell lysates.



MDMX (A-11): sc-374147. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS


1. Lee, J.H., et al. 2014. Protein grafting of p53TAD onto a leucine zipper scaffold generates a potent HDM dual inhibitor. *Nat. Commun.* 5: 3814.
2. Xie, X., et al. 2016. Heterozygous p53^{V172F} mutation in cisplatin-resistant human tumor cells promotes MDM4 recruitment and decreases stability and transactivity of p53. *Oncogene* 35: 4798-4806.
3. Xie, X., et al. 2017. Functional activation of mutant p53 by platinum analogues in cisplatin-resistant cells is dependent on phosphorylation. *Mol. Cancer Res.* 15: 328-339.
4. Han, H., et al. 2018. miR-128 induces pancreas cancer cell apoptosis by targeting MDM4. *Exp. Ther. Med.* 15: 5017-5022.

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.



See **MDMX (G-10): sc-74467** for MDMX antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.