MDMX (D-4): sc-74468



The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

MDMX (D-4) is a mouse monoclonal antibody raised against amino acids 361-490 mapping at the C-terminus of MDMX of human origin.

PRODUCT

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

MDMX (D-4) is available conjugated to agarose (sc-74468 AC), 500 $\mu g/0.25$ ml agarose in 1 ml, for IP; to HRP (sc-74468 HRP), 200 $\mu g/ml$, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74468 PE), fluorescein (sc-74468 FITC), Alexa Fluor® 488 (sc-74468 AF488), Alexa Fluor® 546 (sc-74468 AF546), Alexa Fluor® 594 (sc-74468 AF594) or Alexa Fluor® 647 (sc-74468 AF647), 200 $\mu g/ml$, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74468 AF680) or Alexa Fluor® 790 (sc-74468 AF790), 200 $\mu g/ml$, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MDMX (D-4) 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 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 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: MDMX (h): 293T Lysate: sc-111488, Sol8 cell lysate: sc-2249 or MCF7 whole cell lysate: sc-2206.

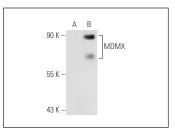
STORAGE

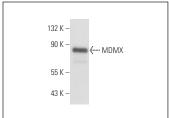
Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

DATA





MDMX (D-4): sc-74468. Western blot analysis of MDMX expression in non-transfected: sc-117752 (A) and human MDMX transfected: sc-111488 (B) 293T whole cell Ivsates.

MDMX (D-4): sc-74468. Western blot analysis of MDMX expression in Sol8 whole cell lysate.

SELECT PRODUCT CITATIONS

- 1. Lee, J.H. and Lu, H. 2011. 14-3-3γ inhibition of MDMX-mediated p21 turnover independent of p53. J. Biol. Chem. 286: 5136-5142.
- Wang, Y., et al. 2014. p53 is positively regulated by miR-542-3p. Cancer Res. 74: 3218-3227.
- 3. Proietti, S., et al. 2014. Melatonin down-regulates MDM2 gene expression and enhances p53 acetylation in MCF7 cells. J. Pineal Res. 57: 120-129.
- Barabutis, N., et al. 2015. p53 protects against LPS-induced lung endothelial barrier dysfunction. Am. J. Physiol. Lung Cell. Mol. Physiol. 308: L776-L787.
- 5. Riascos-Bernal, D.F., et al. 2016. β -catenin C-terminal signals suppress p53 and are essential for artery formation. Nat. Commun. 7: 12389.
- Giustiniano, M., et al. 2017. Computer-aided identification and lead optimization of dual murine double minute 2 and 4 binders: structure-activity relationship studies and pharmacological activity. J. Med. Chem. 60: 8115-8130.
- Zhang, X., et al. 2021. MDM4 as a prognostic factor for patients with gastric cancer with low expression of p53. Anticancer Res. 41: 1475-1483.
- Daniele, S., et al. 2021. CXCR4 antagonism sensitizes cancer cells to novel indole-based MDM2/4 inhibitors in glioblastoma multiforme. Eur. J. Pharmacol. 897: 173936.
- 9. Espadinha, M., et al. 2022. Discovery of MDM2-p53 and MDM4-p53 protein-protein interactions small molecule dual inhibitors. Eur. J. Med. Chem. 241: 114637.
- Maeda, H., et al. 2022. Involvement of miRNA-34a regulated Krüppel-like factor 4 expression in hyperoxia-induced senescence in lung epithelial cells. Respir. Res. 23: 340.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA