Product Information

Anti-MDMX Antibody, Mouse Monoclonal

Clone MDMX-82, purified from hybridoma cell culture

M0445

Product Description

Anti-MDMDX (mouse IgG1 isotype) is derived from the hybridoma MDMX-82 produced by the fusion of mouse myeloma cells (NS1 cells) and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to a fragment of human MDMX. This sequence is identical in cow, mouse, and rat, and is different in two positions in Canis and Xenopus. The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Cat. No. ISO2.

Anti-MDMX recognizes human MDMX. The antibody may be used in ELISA, immunoprecipitation, immunoblotting (~80 kDa), and immunocytochemistry.

Functional p53 protein is critical for efficient cellular responses to different stress conditions. The p53 protein level is tightly regulated by different E3 ubiquitin ligases among them Pihr2, COP1, and MDM2. All three proteins are up regulated by p53, thus negative feedback on p53 protein level is formed. The interaction between MDM2 and p53 is critical for cell viability; loss of Mdm2 causes cell death in vitro and in vivo in a cell dependent manner.

MDMX, also known in mouse as Mdm4 - Mouse Double Minute 4 or HDMX, is a homologue of MDM2.[1-4] The MDMX gene encodes a 490 amino acid protein containing a RING finger domain and a putative nuclear localization signal. The protein has a molecular mass of 80 kDa due to post translational modifications like phosphorylation. MDMX has significant structural similarity to MDM2 E3 ubiquitin ligase.

MDMX can inhibit transcriptional activity of p53 by inhibiting its acetylation. Deletion of Mdm4 in mice causes death at 7.5 to 8.5 days postcoitum due to loss of cell proliferation. However, Mdm4 (hetrozygotes -/+) mice crossed with a p53-null allele, Mdm4 -/- (with a p53-/- background) were completely rescued. Thus, MDM4 acts as a direct regulator of p53 activity.[1-4]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~2 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting

A working concentration of 1-2 µg/mL is recommended using total cell extract of HEK 293T cells transfected with human MDMX.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. Haupt, Y., Cell Cycle, 3, 884-885 (2004).
2. Michael, D., and Oren, M., Curr. Opin. Gen. Dev., 12, 53-59 (2002).
3. Marine, J.C., and Jochemsen, A.G., Biochem. Biophys. Res. Comm., 331, 750-760 (2005).
4. Momand, J., et al., Gene, 242, 15-29 (2000).

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