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ProductInformation

Monoclonal Anti-phospho-MDMX (pTyr^{55})
Clone PH-MDMX- 55
produced in mouse, purified immunoglobulin

Catalog Number **M8070**

Product Description

Monoclonal Anti-phospho-MDMX (pTyr^{55}) (mouse IgG2a isotype) is derived from the hybridoma PH-MDMX-55 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with synthetic phosphorylated peptide corresponding to amino acids 50-64 (pTyr^{55}) of human MDMX (Gene ID: 4194). The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-phospho-MDMX (pTyr^{55}) recognizes human phosphorylated MDMX (pTyr^{55}) (approx. 80 kDa). The antibody may be used in various immunochemical techniques including immunoblotting, immunoprecipitation, immunocytochemistry, and ELISA. The antibody is negative when MDMX is expressed with a kinase mutant and thus is non-phosphorylated.

p53 tumor suppressor protein is critical for efficient cellular responses to different stress conditions. The principle negative regulators of p53 are MDM2 and its homolog MDMX (also known as Mouse Double Minute 4, HDMX in humans). MDM2 promotes p53 for proteasomal degradation, whereas MDMX is the major inhibitor of p53 transcriptional activity.[1, 2] Thus, despite their significant structural similarity, MDM2 and MDMX play distinct roles in p53 regulation. The critical and non-redundant role of MDMX and MDM2 in the regulation of p53 *in vivo* is strikingly demonstrated by the lethality of the *mdmx* or *mdm2* null embryos, which can be fully rescued by the elimination of p53.[3] MDM2 or MDMX are frequently over expressed in human cancers, leading to the suppression of p53. Indeed, tumors with amplification of MDM2 or MDMX generally have wt p53 status, emphasizing the efficiency of these MDMX proteins to inhibit p53 tumor suppression function.[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 weight of 80 kDa due to post-translational modifications like phosphorylation. Studies began to unravel the regulation of MDMX in response to stress conditions, involving post-translational modifications and protein-protein interactions.[4]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.
Antibody concentration: ~2 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For extended storage, freeze at –20 °C 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 discard if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 4-8 µg/mL is recommended using total cell extract of HEK-293T cells co-transfected with human MDMX and a specific kinase.
Note: In order to obtain the best results using various techniques and preparations, we recommend determining 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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