Saint Louis, Missouri 63103 USA
Telephone (800) 325-5832 (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

Monoclonal Anti-MTA2
Clone MTA2-276
Purified Mouse Immunoglobulin

Product Number **M 7569**

Product Description

Monoclonal Anti-MTA2 (mouse IgG1 isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells (NS1 cells) and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to amino acids 626-641of human MTA2, conjugated to KLH. The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma ISO-2).

Monoclonal Anti-MTA2 recognizes human, monkey, bovine, canine, rat, hamster, and mouse MTA2 (~73 kDa). The antibody may be used in ELISA, immunoblotting, immunoprecipitation, and immunocytochemistry.

Metastasis-associated genes (MTAs) comprise a novel gene family with a growing number of members. There are three known genes encoding for six isoforms: MTA1, MTA1S, MTA-ZG29p, MTA2/MTA1L1, MTA3, MTA3L.[1-3] Human MTA2 is a 668 amino acids protein that shares ~80% overall homology to human MTA1 and MTA3 proteins, the C-terminus being more divergent than the N-terminus.[2] The discovery that both MTA1 and MTA2/MTA1L1 interact with the histone deacetylases HDAC1 and HDAC2 within the nuclear remodeling and deacetylation complexes Mi2/NuRD, suggests that these proteins are involved in transcriptional repression.[4-6] MTA3 was shown to be an estrogen receptor (ER)-regulated gene, which targets the transcription factor Snail, repressing in turn E-cadherin expression and leading to epithelial de-differentiation and increased metastasis.[2] In the p53 pathway, MTA2/MTA1L1 is better known as PID. PID expression represses p53-dependent transcriptional activation, and modulates p53- mediated growth arrest and apoptosis, showing that deacetylation and functional interaction by the PID/MTA2/MTA1L1 associated NuRD complex may represent an important pathway to regulated p53 function.[7]

Reagent

The antibody is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a presevative.

Antibody Concentration: ~ 2 mg/mL

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous 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 is not recommended. Storage in frost-free freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

By immunoblotting, a working antibody concentration of 1-2 µg/mL is recommended using 293T total cell extract.

Note: In order to obtain best results in various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Toh, Y., et al., J. Biol. Chem., **269**, 22958-22963 (1994).
2. Fujita, N., et al., Cell, **113**, 207-219 (2003).
3. Luo, J., et al., Nature, **408**, 377-381 (2000).
4. Yao, Y-L., et al., J. Biol. Chem., **278**, 42560-42568 (2003).
5. Toh, Y., et al., J. Exp. Clin. Cancer Res., **19**, 105-111 (2000).
6. Xue, Y., et al., Molec. Cell, **2**, 851-861 (1998).
7. Luo, J., et al., Nature, **408**, 377-381 (2000).

KAA/EK 04/06