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Product Information

Anti-MTA3L
produced in rabbit, IgG fraction of antiserum

Catalog Number **M0819**

Product Description

Anti-MTA3L is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 551-568 of human MTA3L, conjugated to KLH via an N-terminal added lysine residue. The immunizing sequence is not present in the other members of the family, MTA1 and MTA2. Whole antiserum is purified to provide an IgG fraction of antiserum.

Anti-MTA3L recognizes specifically human MTA3L by immunoblotting (75 kDa). The antibody does not cross react with MTA1 and MTA2. Staining of the MTA3L band in immunoblotting is specifically inhibited by the immunizing peptide.

Metastasis-associated genes (MTAs) comprise a novel gene family with a growing number of members. Currently, there are three known genes encoding six isoforms (MTA1, MTA1S, MTA-ZG29p, MTA2/MTA1L1, MTA3, MTA3L).[1-3] MTA3 is a component of the Mi-2/NURD complex.[2] The gene encodes for two forms, 515 amino acids and a longer protein of 594 amino acids, called MTA3L. MTA3 isoforms share approx. 70% overall homology to human MTA1 and MTA2 proteins, the C-terminus being more divergent than the N-terminus.[2] MTA3 is an ER (estrogen receptor)-regulated component of the Mi-2/NuRD transcriptional corepressor complex, which is characterized by the heterogeneity of its subunits.[4] In addition to MTA3, components of Mi2-NuRD include the ATPase Mi-2, MBD3 (Methyl CpG binding protein) and histone deacetylase 1 (HDAC1). After estrogen binding to the estrogen receptor, MTA3, in conjunction with other NuRD components, decreases expression of the transcriptional repressor Snail, ultimately modulating E-cadherin expression and maintenance of normal epithelial architecture.[2, 4-6] Loss of MTA3 or ER leads to deregulated expression of Snail, transcriptional repression of E-cadherin, and a consequent predisposition to invasive cell growth in breast epithelial cancers.[2] It has been shown that MTA3 has a role in B cell fate determination, through interaction with the transcription factor BCL-6 in the context of Mi-2/NuRD.[7]

Reagent

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

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 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 dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody dilution of 1:1,000-1:2,000 is recommended using HEK 293-T transfected with MTA3L cell extracts.

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

References

1. Toh, Y., et al., *J. Biol. Chem.*, **269**, 22958-22963 (1994).
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3. Luo, J., et al., *Nature*, **408**, 377-381 (2000).
4. Bowen, et al., *Biochim. Biophys. Acta*, **1677**, 52-57 (2004).
5. Mishra, S.K., et al., *J. Biol. Chem.*, **31**, 32709-32715 (2004).
6. Fearon, E.R., et al., *Cancer Cell*, **4**, 307-310 (2003).
7. Fujita, N.M., et al., *Cell*, **119**, 75-88 (2004).

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