



3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

Product Information

Anti-Maspin

produced in rabbit, affinity isolated antibody

Catalog Number **M0945**

Product Description

Anti-Maspin is developed in rabbit using a synthetic peptide corresponding to amino acid residues 333-348 of human maspin with a C-terminal added cysteine, conjugated to KLH, as immunogen. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Maspin specifically recognizes human maspin. Applications include immunoblotting and immunohistochemistry. Detection of the maspin band by immunoblotting is specifically inhibited with the immunizing peptide.

Maspin is a serine protease inhibitor (serpin) with tumor suppressive activities. Maspin gene is located on chromosome 18q21.3 in a cluster of genes encoding members of the ovalbumin family of serine protease inhibitors, e.g., plasminogen activator inhibitor 2 (PAI2), squamous cell carcinoma antigen-1 and -2 (SCCA1 and SCAA2).¹ Maspin protein was identified in a search for tumor suppressor genes that are defective in human breast carcinoma cells. Maspin is expressed in normal mammary epithelial cell strains, but not in most mammary tumor cell lines. Expression of maspin was found also in human cornea in the epithelium, endothelium and stroma cells.^{2,3} In cancer cells, the expression of maspin is down regulated, but not due to mutations in the gene. Re-expression of maspin in mammary carcinoma cells does not alter the growth properties of the cells *in vitro*, but reduces their ability to induce tumors, to metastasize in nude mice, and to invade a basement membrane matrix *in vitro*.¹ The molecular mechanism of maspin action is not clear. Using a two-hybrid system, it has been found that heat shock protein 90, glutathione S-transferase (GST), and heat shock protein 70 interacted with maspin with the highest frequencies.⁴ This protein exerts its tumor suppressive role, at least in part, by blocking the activity of pericellular uPA (urokinase Plasminogen Activator).⁵

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide and 1% inactivated bovine serum albumin.

Antibody concentration: ~0.5 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, 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 concentration of 1-2 µg/mL is recommended using whole cell extract of A431 cells applying a chemiluminescent detection reagent.

Immunohistochemistry: a working concentration of 10-20 µg/mL is recommended by immunohistochemical staining of heat-retrieved formalin-fixed, paraffin-embedded human prostate sections using biotin/ExtrAvidin®-peroxidase.

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

References

1. Schneider, S.S., et al., *Proc. Nat. Acad. Sci. USA*, **92**, 3147-3151 (1995).
2. Zou, Z., et al., *Science*, **263**, 526-529 (1994).
3. Ngamkitidechakul, C., et al., *Invest. Ophthal. Vis. Sci.*, **42**, 3135-3141 (2001).
4. Yin, S., et al., *J. Biol. Chem.*, **280**, 34985-34996 (2005).
5. Cher, M.L., et al., *Proc. Nat. Acad. Sci. USA*, **100**, 7847-7852 (2003).

ExtrAvidin is a registered trademark of Sigma-Aldrich Biotechnology.

EK,KAA,PHC 05/06-1

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.