

ORDERING INFORMATION

Catalog Number: MAB4138

Clone: 438709

Lot Number: CBSX01

Size: 100 µg

Formulation: 0.2 µm filtered solution in PBS with 5% trehalose

Storage: -20° C

Reconstitution: sterile PBS

Specificity: mouse S100A4

Immunogen: *E. coli*-derived rmS100A4

Ig class: rat IgG_{2b}

Recommended Applications:

Western blot
Immunohistochemistry

Other Application:

Direct ELISA

Background

Mouse S100 calcium-binding protein A4 (S100A4; also metastasin, mts1, metastatic cell protein, and placental calcium-binding protein) is a 12 kDa member of the S100 family of calcium-binding proteins. S100A4 is 101 amino acids (aa) in length and contains two calcium-binding EF-hand domains (aa 12 - 47 and 50 - 85). Mouse S100A4 shares 96%, 93%, and 90% aa sequence identity with rat, human, and bovine S100A4, respectively. S100A4 is involved in regulating the metastatic behavior of tumor cells. It is ubiquitously expressed in tumor cells and normal cells, but the level of S100A4 expression correlates with the metastatic potential of tumor cells.

Preparation

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a rat immunized with purified, *E. coli*-derived, recombinant mouse S100A4 (rmS100A4; aa 1 - 101; Accession # P07091). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

Formulation

Lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

Reconstitution

Reconstitute with sterile PBS. If 0.2 mL of PBS is used, the antibody concentration will be 500 µg/mL.

Storage

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C in a manual defrost freezer for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

Specificity

This antibody detects rmS100A4 in direct ELISAs and Western blots. In these formats, this antibody shows no cross-reactivity with rmS100A6, 8, 9, 10, 13, 16, rhS100A1, 2, 7, 11, or rhS100P.

Applications

Western blot - This antibody can be used at 2 µg/mL with the appropriate secondary reagents to detect murine S100A4 in cell or tissue extracts under reducing conditions only. Refer to <http://www.RnDSystems.com/go/WBCellLysates> for detailed procedures for preparing lysates and Western blotting. The specific buffers are listed below.

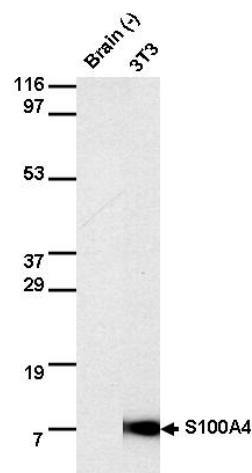
<u>Blotting Buffer</u>	<u>Blocking Solution</u>	<u>Antibody Solution</u>
25 mM Tris, pH 7.4 0.15 M NaCl 0.05% Tween® 20	5% nonfat dry milk in Blotting Buffer	5% nonfat dry milk in Blotting Buffer

Immunohistochemistry - This antibody was used at a concentration of 25 µg/mL with appropriate secondary reagents to detect S100A4 in frozen mouse lung, kidney, spleen and smooth muscle tissue sections. For chromogenic detection of labeling, the use of R&D Systems Cell and Tissue Staining Kits (CTS Series) is recommended.

Direct ELISA - This antibody can be used at 0.5 - 1.0 µg/mL with the appropriate secondary reagents to detect mouse S100A4. The detection limit for rmS100A4 is approximately 20 ng/well.

For immunohistochemistry images, please refer to our website at <http://www.RnDSystems.com/go/ihc>.

Optimal dilutions should be determined by each laboratory for each application.



Detection of mouse S100A4 with MAB4138.

Lysates were prepared from mouse 3T3-L1 cells in reducing sample buffer, resolved by SDS-PAGE (10 µg total protein/lane), and transferred to an Immobilon-P membrane. The blot was developed with 2 µg/mL MAB4138 and chemiluminescent detection substrate.