

# Anti- S100a12 Antibody MSVA-812M / Mouse monoclonal

Human SwissProt	P80511
Human Gene Symbol	S100A12
Synonyms	CAAF1, CAGC, CGRP, ENRAGE, MRP6, p6
Specificity	S100A12
Immunogen	Recombinant human S100A12 fragment
Isotype	Mouse / IgG
Species Reactivity	Human
Localization	Intracellular, Secreted

Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non- hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	Spleen: A significant number of inflammatory cells should show a strong S100A12 immunostaining while the majority of cells remain completely negative.
Negative Control	Colon: All epithelial and muscular cells must not show any S100A12 immunostaining. Few scattered S100A12 positive inflammatory cells can occur (mostly within blood vessels)



Gastric adenocarcinoma, densly infiltrated by S100A12 positive granulocytes.

Colorectal adenocarcinoma showing numerous S100A12 positive granulocytes in the stroma and within tumor glands. Numerous S100A12 positive granulocytes occur in the spleen.

## Biology

S100A12 is a 10,5 kDa protein which is coded by the S100A12 gene at chromosome 1q21. Within granulocytes, S100A12 is co-expressed with S100A8 and S100A9 which jointly form the calprotectin heterodimer. S100A12 and S100A8/A9 proteins are all coded by neighboring genes and appear to be coregulated, to have functional similarities, and to interact with each other. S100A12 is constitutively expressed in neutrophils but can be induced in other cell types including epithelial cells. S100A12 acts as a damage-associated molecular patterns (DAMPs) protein. These are molecules released by stressed cells undergoing necrosis and act as endogenous signals to promote a proinflammatory response. Accordingly, S100A12 promotes upregulation of proinflammatory cytokines such as interleukin-16. S100A12 is also a ligand for the receptor for advanced glycation end products (RAGE) on monocytes or epithelial cells. In normal tissues, S100A12 immunostaining is primarily seen in granulocytes and their precursor cells in the bone marrow. Although it cannot be excluded, that at a fraction of histocytes/monocytes are also S100A12 positive, (at least) most of these cells do not exhibit a S100A12 immunostaining in noninflamed normal tissues. In tumors, S100A12 immunostaining is regularly seen in a fraction of tumor associated inflammatory cells.

### **Potential Research Applications**

-Marker for granulocytes and other "non-lymphocytic" inflammatory cells.

# **Protocol Suggestions**

**Dilution: 1:150 ; pH 7,8 is optimal**. Freshly cut sections should be used (less than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

## Limitations

This antibody is available for **research use only** and is not approved for use in diagnostics.

#### Warranty

There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



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Adrenal gland - Several granulocytes - located within small capillaries - show S100A12 immunostaining



Colon descendens, mucosa



Lung - Few granulocytes within alveolar capillaries show \$100A12 immunostaining



Thyroid gland



Bone marrow - S100A12 immunostaining is seen in granulocytes and their precursor cells



Duodenum, mucosa - Few granulocytes which are mainly located within small capillaries show S100A12 immunostaining



Placenta, mature



Tonsil - Few scattered granulocytes exhibit S100A12 immunostaining



Bronchus, mucosa - Few granulocytes - mainly located within small capillaries - show S100A12 . immunostaining



Kidney, medulla





Cerebellum (granule cell layer, white matter)



Liver - Few scattered sinusoidal granulocytes are S100A12 positive



Rectum, mucosa



Uterus, endometrium (pregnancy) -Few scattered granulocytes show S100A12 immunostaining



Urinary bladder, urothelium - Few scattered granulocytes show S100A12 immunostaining



