MS Validated Antibodies

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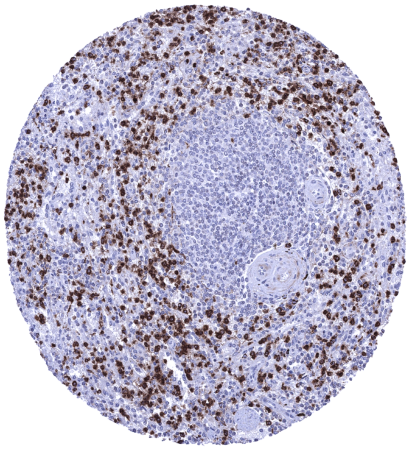
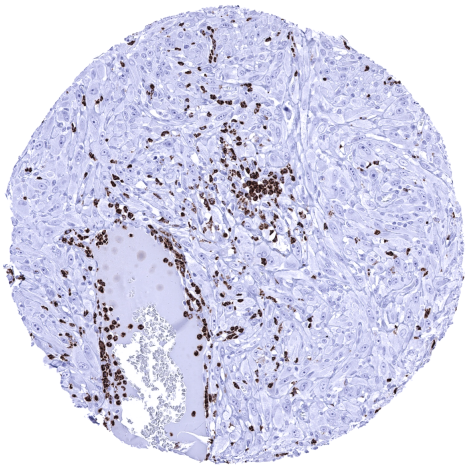
Anti- Myeloperoxidase / MPO Antibody
MSVA-692M / Mouse monoclonal

Human SwissProt	P05164
Human Gene Symbol	MPO
Synonyms	4 kDa / 89 kDa myeloperoxidase; EC 1.11.1.7; EC1.11.2.2; fj80f04; MPO; mpx; myeloid-specific peroxidase; Myeloperoxidase; Myeloperoxidase heavy chain; Myeloperoxidase light chain
Specificity	MPO
Immunogen	Recombinant fragment of human MPO protein
Isotype	Mouse / IgG
Species Reactivity	Human
Localization	Lysozome

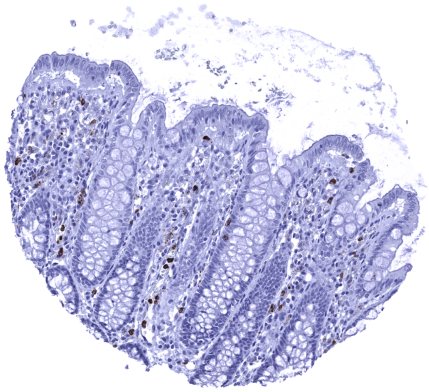
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	Spleen: Numerous MPO positive granulocytes are usually seen within the red pulp of the spleen.
Negative Control	Colon: MPO immunostaining should be absent in all epithelial cells of the colon. MPO positive granulocytes may be seen within capillaries or in the stroma of the lamina propria.



Spleen - Numerous MPO positive granulocytes are usually seen within the red pulp of the spleen.



Numerous MPO positive intravascular and stromal granulocytes are seen in a squamous cell carcinoma of the oral cavity.



Colon descendes, mucosa - In the normal colon, MPO positive granulocytes occur within small capillaries and also the stroma of the lamina propria.

Biology

Myeloperoxidase (MPO) is a 150 kDa peroxidase enzyme coded by the MPO gene on chromosome 17q23.1. MPO is most abundantly expressed in neutrophil granulocytes and stored in azurophilic granules. It comprises about 5% of the dry mass of neutrophil granulocytes. MPO is released to provide defense against invading pathogens. Its antimicrobial activity involves the production of acid. Antibodies against MPO which are also termed anti-neutrophil cytoplasmic antibodies (ANCAs) have been implicated in various types of vasculitis. MPO is considered a possible therapeutic target for coronary heart disease, inflammatory bowel disease and other conditions. In normal tissues, a strong MPO immunostaining is seen in neutrophile granulocytes while other granulocytes show a somewhat weaker and more variable staining. MPO positivity is also seen in granulocyte precursor cells in the bone marrow. MPO positive granulocytes occur in most normal tissues, either within blood vessels or also within the tissue. MPO positive material can be seen in the lumina of prostatic glands in some samples. In tumors of all types, a variable content of MPO positive granulocytes can be seen.

Potential Research Applications

-Visualization and quantification of granulocytes for assessing the clinical role of these cells.

-The distinction of granulocytes in multicolor immunofluorescence is important in immune-oncological panels for the evaluation of the microenvironment of cancers.

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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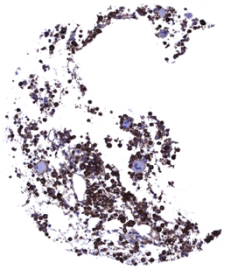
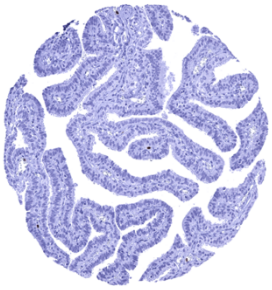
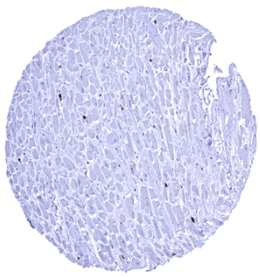


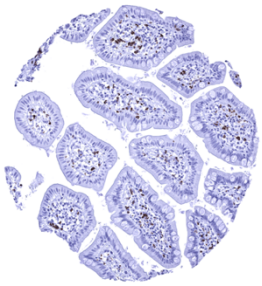
Bone marrow - Numerous MPO positive granulocyte precursor cells are seen in the bone marrow.



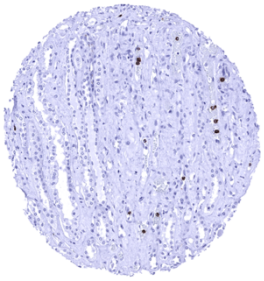
Fallopian tube, mucosa



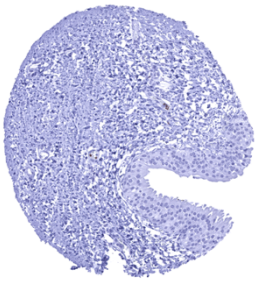
Heart - MPO positive granulocytes are seen within small capillaries.



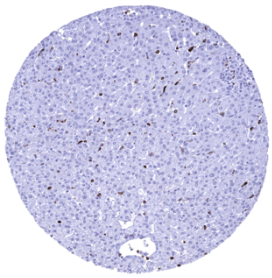
Ileum, mucosa - MPO positive granulocytes are seen within small capillaries and possibly also the stroma of the lamina propria.



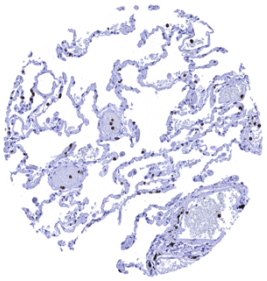
Kidney, medulla - MPO positive granulocytes are seen within small capillaries.



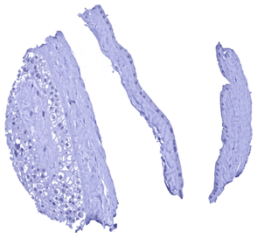
Kidney, pelvis, urothelium



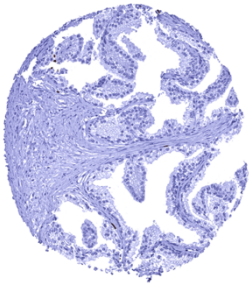
Liver - Few MPO positive granulocytes are seen within the liver sinus.



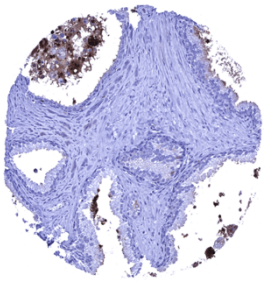
Lung - MPO positive granulocytes are seen within small blood vessels.



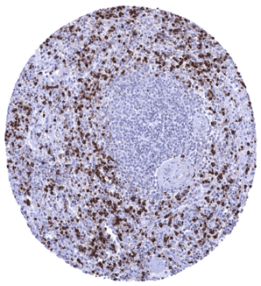
Placenta, mature, amnion and chorion



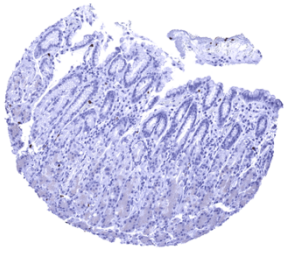
Prostate - MPO positive intraglandular material is often absent in the prostate.



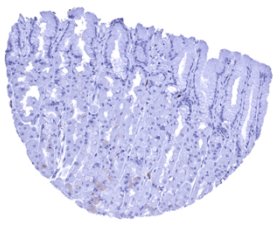
Prostate - MPO positive material can be seen in the lumina of prostatic glands.



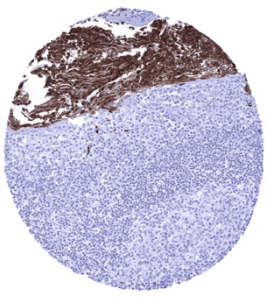
Spleen - Numerous MPO positive granulocytes are usually seen within the red pulp of the spleen.



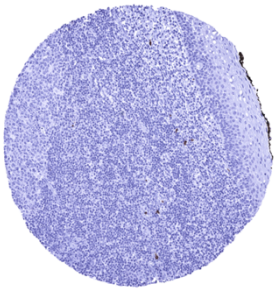
Stomach, antrum - A faint cytoplasmic MPO staining in stomach glands is considered a tolerable cross-reactivity of our antibody.



Stomach, corpus - A faint cytoplasmic MPO staining in stomach glands is considered a tolerable cross-reactivity of our antibody.



Tonsil - Significant MPO staining is seen in inflamed tonsil crypt epithelium which also contains numerous MPO positive granulocytes.



Tonsil, surface epithelium