
Monoclonal Antibody To Porcine Alpha-2-Macroglobulin **Marker for a major high-molecular weight protein in plasma**

Clone PAM-F101 is a unique monoclonal antibody developed against porcine α -2-Macroglobulin. α -2-Macroglobulin (α 2M) is a broad spectrum proteinase inhibitor synthesized mainly by hepatocytes, and locally by macrophages. The inhibitory mode of action uses a capturing mechanism through a peptide sequence ("bait region") which contains specific cleavage sites for different proteinases. When a proteinase cleaves the bait region, a conformational change and concomitant thioester bond hydrolysis is induced, leading to covalent binding of α 2M to the proteinase. The bound enzyme remains active against low molecular weight substrates while the activity against high molecular weight substrates is reduced. The proteinase- α 2M complex is recognized by macrophage receptors and cleared from the system.

α 2M is composed of four identical subunits arranged as a pair of disulfide-linked dimers, altogether with 720kDa molecular weight. α 2M is sensitive to hypochlorite which induces dissociation of native α 2M tetramers into stable dimers that are no longer able to trap proteases. Electrophoresis typically yields a 360kDa band in the native state, 180kDa with SDS-PAGE under non-reducing conditions. Reducing conditions (e.g. dithiothreitol DTT) will generate two different fragments with molecular mass of 93 and 87 kDa, respectively.

This antibody was produced serum-free, without fetal calf serum.

Product number: T-3512

Clone: PAM-F101

Lot: 01PO1505

TECHNICAL AND ANALYTICAL CHARACTERISTICS:

Host species, subclass: Mouse IgG1

Quantity: 200 μ g

Format: Affinity purified from cell culture supernatant, lyophilized. Reconstitute by adding 0.5ml distilled water. This stock solution contains 0.4mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 5mg/ml bovine serum albumin (BSA) as a stabilizer and 0.05% (v/v) Kathon CG as a preservative.

Stability: Original vial: 1 year at 4° - 8°C. Minimize repeated thawing and freezing of the stock solution.

Applications: IHC (f), WB (native). Each lot has been tested and validated for immunohistochemistry (IHC).

Approximate working dilution for IHC:

Frozen sections: 0.2-0.4 μ g/ml (1:1000-1:2000)

Paraffin sections: does not react on routinely processed paraffin sections.

Optimal dilutions should be determined by the end user.

Suggested positive control: swine kidney.

Please see www.bma.ch for protocols and general information.

Immunogen: Porcine lung extract.

Antigen, epitope: The antigen is alpha-2-Macroglobulin, according to the results obtained in IHC and in Western Blot with purified α -2-macroglobulin. The epitope has not been further characterized.

Antigen distribution: **Tissue sections:** The antibody reacts with tissue sections of kidney, pancreas, brain, stomach, adrenal, lung, intestine, skin, testis, liver, lymph node and uterus. Staining is prominent with endothelial structures in all organs, and with serum.

Specificity: **Porcine:** positive.

Other: not tested

Selected references

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This product contains Kathon as a preservative and is intended for *in vitro* laboratory use and research purposes only. Purchase of this product does not include authorization to reverse engineer any part thereof, nor to use it in diagnostic or therapeutic applications.