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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 (α2M) 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 α2M 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-α2M complex is recognized by macrophage receptors and cleared from the system.

α2M is composed of four identical subunits arranged as a pair of disulfide-linked dimers, altogether with 720kDa molecular weight. α2M is sensitive to hypochlorite which induces dissociation of native α2M 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.

TECHNICAL AND ANALYTICAL CHARACTERISTICS

Product Number:	T-3512 (Lot 01PO1505)
Clone:	PAM-F101
Host species, isotype:	Mouse IgG1
Quantity:	200µg
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 from date of purchase. Avoid freeze-thaw cycles.
Applications:	IHC (f), WB (native). Each lot has been tested and validated for immunohistochemistry (IHC).
	Approximate working dilution for IHC:
	Frozen sections: 0.2-0.4µg/ml (1:1000-1:2000) Paraffin sections: does not react on routinely processed paraffin sections

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	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
Protein database:	pig-A0A4X1SUH0
Antigen, epitope:	The antigen is alpha-2-Macroglobulin, according to the results obtained in IHC and in Western Blot with purified α-2-macro-globulin. 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

For in vitro research only. This product contains Kathon™ CG as a preservative.

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