BMA BIOMEDICALS

Monoclonal Antibody to Porcine Hemoglobin beta

Marker for the adult hemoglobin beta subunit

Monoclonal antibody PLA114 is specifically directed against the porcine hemoglobin beta subunit. Hemoglobin contains four subunits, of which two are identical. They form the $\alpha_2\beta_2$ scaffold that holds the iron-containing heme group which is responsible for oxygen transport by red blood cells. Each subunit has a molecular weight of about 16kDa.

In humans, the beta-globin gene is activated around the time of birth, replacing embryonic and fetal globin genes. In humans, mutations in the adult β-globin gene cause β-thalassemia and sickle cell disease (SCD). β-Thalassemia results from a reduced production of β-globin while SCD is caused by a mutation that results in an amino acid substitution of adult β-globin. Hemoglobin tetramers bearing this mutation polymerize inside red blood cells and distort them into a characteristic crescent-shaped appearance. These rigid sickle cells are more prone to lysis and tend to occlude blood flow in the microvasculature, causing severe physiological problems.

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

TECHNICAL AND ANALYTICAL CHARACTERISTICS

Product Number:	T-3523 (Lot 01PO1518)
Clone:	PLA114
Host species, isotype:	Mouse IgG1, kappa
Quantity:	0.2mg
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:	Tested for immunohistochemistry (IHC) and Western blot.
	Approximate working dilutions: IHC, frozen sections: 0.2µg/ml (1:2000) IHC, paraffin sections: 10µg/ml (1:40) Western Blot: 0.25µg/ml (1:2000)
	Optimal dilutions should be determined by the end user
	Please see **www.bma.ch** for protocols and general information
Immunogen:	Porcine liver extract
Protein database:	pig-P02067

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Antigen, epitope:	Immunoprecipitation and subsequent identification by nanoLC-ESI-MS/MS identified the antigen as hemoglobin beta chain. The epitope has not been further characterized.
Antigen distribution:	**Tissue sections:** In paraffin sections the antibody stains all erythrocytes whereas in frozen sections the antibody yields a picture typical of a molecule leaking out of blood vessels and diffusing into surrounding tissue.
Specificity:	**Pig:** Erythrocytes, plasma **Other species:** not tested

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

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