

# AMBP Antibody

Rabbit mAb

Catalog # AP91429

## Product Information

<b>Application</b>	WB, IHC
<b>Primary Accession</b>	<a href="#">P02760</a>
<b>Reactivity</b>	Human
<b>Clonality</b>	Monoclonal
<b>Other Names</b>	A1M; alpha 1 microglobulin bikunin; Alpha 1 microglycoprotein; AMBP; Bikunin; EDC1; HI30;
<b>Isotype</b>	Rabbit IgG
<b>Host</b>	Rabbit
<b>Calculated MW</b>	38999

## Additional Information

<b>Dilution</b>	WB 1:500~1:2000 IHC 1:50~1:200
<b>Purification</b>	Affinity-chromatography
<b>Immunogen</b>	A synthesized peptide derived from human AMBP
<b>Description</b>	Inter-alpha-trypsin inhibitor inhibits trypsin, plasmin, and lysosomal granulocytic elastase. Inhibits calcium oxalate crystallization. Trypstatin is a trypsin inhibitor.
<b>Storage Condition and Buffer</b>	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

## Protein Information

<b>Name</b>	AMBP
<b>Synonyms</b>	HCP, ITIL
<b>Function</b>	[Alpha-1-microglobulin]: Antioxidant and tissue repair protein with reductase, heme-binding and radical-scavenging activities. Removes and protects against harmful oxidants and repairs macromolecules in intravascular and extravascular spaces and in intracellular compartments (PubMed: <a href="#">11877257</a> , PubMed: <a href="#">15683711</a> , PubMed: <a href="#">22096585</a> , PubMed: <a href="#">23157686</a> , PubMed: <a href="#">23642167</a> , PubMed: <a href="#">25698971</a> , PubMed: <a href="#">32092412</a> , PubMed: <a href="#">32823731</a> ). Intravascularly, plays a regulatory role in red cell homeostasis by preventing heme- and reactive oxygen species-induced cell damage. Binds and degrades free heme to protect fetal and adult red blood cells from hemolysis (PubMed: <a href="#">11877257</a> , PubMed: <a href="#">32092412</a> ). Reduces extracellular methemoglobin, a Fe <sup>3+</sup> (ferric) form of hemoglobin that cannot bind oxygen, back to the Fe <sup>2+</sup> (ferrous) form deoxyhemoglobin, which has oxygen-carrying potential (PubMed: <a href="#">15683711</a> ).

Upon acute inflammation, inhibits oxidation of low-density lipoprotein particles by MPO and limits vascular damage (PubMed:[25698971](#)). Extravascularly, protects from oxidation products formed on extracellular matrix structures and cell membranes. Catalyzes the reduction of carbonyl groups on oxidized collagen fibers and preserves cellular and extracellular matrix ultrastructures (PubMed:[22096585](#), PubMed:[23642167](#)). Importantly, counteracts the oxidative damage at blood-placenta interface, preventing leakage of free fetal hemoglobin into the maternal circulation (PubMed:[21356557](#)). Intracellularly, has a role in maintaining mitochondrial redox homeostasis. Bound to complex I of the respiratory chain of mitochondria, may scavenge free radicals and preserve mitochondrial ATP synthesis. Protects renal tubule epithelial cells from heme-induced oxidative damage to mitochondria (PubMed:[23157686](#), PubMed:[32823731](#)). Reduces cytochrome c from Fe<sup>3+</sup> (ferric) to the Fe<sup>2+</sup> (ferrous) state through formation of superoxide anion radicals in the presence of ascorbate or NADH/NADPH electron donor cofactors, ascorbate being the preferred cofactor (PubMed:[15683711](#)). Has a chaperone role in facilitating the correct folding of bikunin in the endoplasmic reticulum compartment (By similarity).

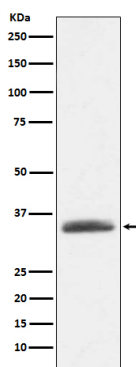
### Cellular Location

[Alpha-1-microglobulin]: Secreted. Endoplasmic reticulum. Cytoplasm, cytosol. Cell membrane; Peripheral membrane protein. Nucleus membrane; Peripheral membrane protein. Mitochondrion inner membrane; Peripheral membrane protein. Secreted, extracellular space, extracellular matrix. Note=The cellular uptake occurs via a non-endocytotic pathway and allows for localization to various membrane structures. A specific binding to plasma membrane suggests the presence of a cell receptor, yet to be identified. Directly binds collagen fibers type I.

### Tissue Location

[Alpha-1-microglobulin]: Expressed by the liver and secreted in plasma. Occurs in many physiological fluids including plasma, urine, and cerebrospinal fluid (PubMed:[11877257](#)). Expressed in epidermal keratinocytes, in dermis and epidermal-dermal junction (at protein level) (PubMed:[22096585](#)). Expressed in red blood cells (at protein level) (PubMed:[32092412](#)). Expressed in placenta (PubMed:[21356557](#)).

## Images



Western blot analysis of AMBP expression in human plasma lysate.

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