10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

AMBP Antibody

Rabbit mAb
Catalog # AP91429

Product Information

Application	WB, IHC
Primary Accession	P02760
Reactivity	Human
Clonality	Monoclonal
Other Names	A1M; alpha 1 microglobulin bikunin; Alpha 1 microglycoprotein; AMBP; Bikunin; EDC1; HI30;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	38999

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:50~1:200
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human AMBP
Description	Inter-alpha-trypsin inhibitor inhibits trypsin, plasmin, and lysosomal granulocytic elastase. Inhibits calcium oxalate crystallization. Trypstatin is a trypsin inhibitor.
Storage Condition and Buffer	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

Name	AMBP
Synonyms	HCP, ITIL
Function	[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:11877257, PubMed:15683711, PubMed:22096585, PubMed:23157686, PubMed:23642167, PubMed:25698971, PubMed:32092412, PubMed:32823731). 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:11877257, PubMed:32092412). Reduces extracellular methemoglobin, a Fe3+ (ferric) form of hemoglobin that cannot bind oxygen, back to the Fe2+ (ferrous) form deoxyhemoglobin, which has oxygen-carrying potential (PubMed:15683711).

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 Fe3+ (ferric) to the Fe2+ (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).

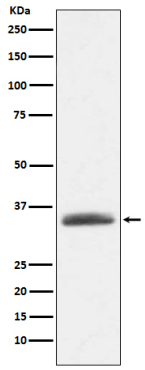
Cellular Location

[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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.