

KD-Validated Anti-AMBP Rabbit Monoclonal Antibody

Rabbit monoclonal antibody

Catalog # AGI1315

Product Information

Application	WB, ICC
Primary Accession	P02760
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	23GB3200
Calculated MW	38999
Gene Name	AMBP
Aliases	AMBP; Alpha-1-Microglobulin/Bikunin Precursor; HCP; Protein HC; IATIL; ITILC; EDC1; HI30; ITIL; UTI; Complex-Forming Glycoprotein Heterogeneous In Charge; Inter-Alpha-Trypsin Inhibitor Light Chain; Growth-Inhibiting Protein 19; Uronic-Acid-Rich Protein; Protein AMBP; Trypstatin; Uristatin; Bikunin; ITI; A1M
Immunogen	A synthesized peptide derived from human AMBP

Additional Information

Gene ID	259
Other Names	Protein AMBP, Protein HC, Alpha-1-microglobulin, 1.6.2.-, Alpha-1 microglycoprotein, Complex-forming glycoprotein heterogeneous in charge, Inter-alpha-trypsin inhibitor light chain, ITI-LC, Bikunin, EDC1, HI-30, Uronic-acid-rich protein, Trypstatin, AMBP, HCP, ITIL

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 Fe ³⁺ (ferric) form of hemoglobin that cannot bind oxygen, back to the Fe ²⁺ (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](#)).

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