

AMBP Antibody (N-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13764a

Specification

AMBP Antibody (N-term) - Product Information

| | |
|-------------------|-----------------------------|
| Application | WB, IHC-P,E |
| Primary Accession | P02760 |
| Other Accession | NP_001624.1 |
| Reactivity | Human |
| Host | Rabbit |
| Clonality | Polyclonal |
| Isotype | Rabbit IgG |
| Calculated MW | 38999 |
| Antigen Region | 77-104 |

AMBP Antibody (N-term) - Additional Information

Gene ID 259

Other Names

Protein AMBP, Alpha-1-microglobulin, Protein HC, 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

Target/Specificity

This AMBP antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 77-104 amino acids from the N-terminal region of human AMBP.

Dilution

WB~~1:1000
IHC-P~~1:10~50

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

AMBP Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

AMBP Antibody (N-term) - 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

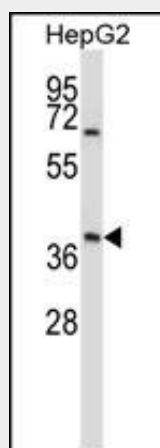
[Alpha-1-microglobulin]: Expressed by the liver and secreted in plasma. Occurs in many physiological fluids including plasma, urine, and cerebrospinal fluid (PubMed:[11877257](#)). Expressed in epidermal keratinocytes, in dermis and epidermal-dermal junction (at protein level) (PubMed:[22096585](#)).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

AMBP Antibody (N-term) - Protocols

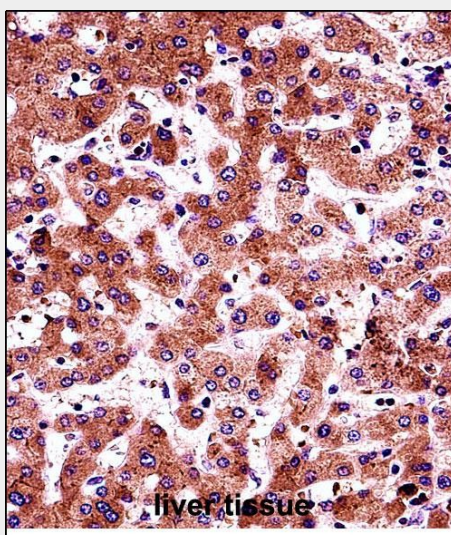
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

AMBP Antibody (N-term) - Images



AMBP Antibody (N-term) (Cat. #AP13764a) western blot analysis in HepG2 cell line lysates (35ug/lane). This demonstrates the AMBP antibody detected the AMBP protein (arrow).



AMBP Antibody (N-term) (Cat. #AP13764a) immunohistochemistry analysis in formalin fixed and paraffin embedded human liver tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of AMBP Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

AMBP Antibody (N-term) - Background

This gene encodes a complex glycoprotein secreted in plasma. The precursor is proteolytically processed into distinct functioning proteins: alpha-1-microglobulin, which belongs to the superfamily of lipocalin transport proteins and may play a role in the regulation of inflammatory processes, and bikunin, which is a urinary trypsin inhibitor belonging to the superfamily of Kunitz-type protease inhibitors and plays an important role in many physiological and pathological processes. This gene is located on chromosome 9 in a cluster of lipocalin genes.

AMBP Antibody (N-term) - References

Olsson, M.G., et al. *Radiat. Res.* 174(5):590-600(2010)
Allhorn, M., et al. *Blood* 99(6):1894-1901(2002)

Amoresano, A., et al. Eur. J. Biochem. 267(7):2105-2112(2000)
Xu, Y., et al. J. Mol. Biol. 276(5):955-966(1998)
Vetr, H., et al. Biol. Chem. Hoppe-Seyler 371(12):1185-1196(1990)