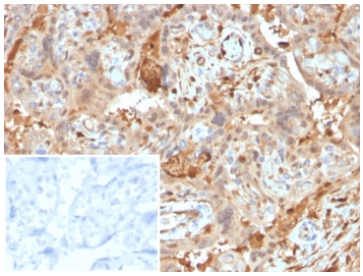
Alpha 1 Microglobulin Antibody Mouse Monoclonal AMBP/4536 / AMBP / Bikunin [clone AMBP/4536] (V5301)

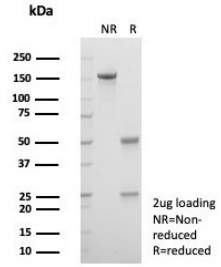
Catalog No.	Formulation	Size
V5301-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5301-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5301SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2, kappa
Clone Name	AMBP/4536
Purity	Protein A/G affinity
UniProt	P02760
Localization	Secreted
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This Alpha 1 Microglobulin antibody is available for research use only.



Alpha 1 Microglobulin Antibody Placenta IHC. Immunohistochemistry of Alpha 1 Microglobulin Antibody Mouse Monoclonal AMBP/4536 in human placental tissue. Formalin-fixed, paraffin-embedded human placenta sections demonstrate cytoplasmic HRP-DAB brown staining in trophoblastic epithelial cells consistent with Alpha-1-microglobulin (AMBP) expression. Surrounding stromal components show comparatively weaker staining. The inset panel shows PBS used in place of primary antibody as a negative control, demonstrating minimal background signal. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min followed by cooling prior to antibody incubation.



SDS-PAGE analysis of purified, BSA-free mouse monoclonal Alpha 1 Microglobulin antibody (clone AMBP/4536) as confirmation of integrity and purity.

Description

Alpha 1 Microglobulin is a secreted glycoprotein encoded by the AMBP gene and widely known as Alpha-1-microglobulin. Alpha 1 Microglobulin Antibody Mouse Monoclonal AMBP/4536 recognizes this small plasma and extracellular protein, which is produced primarily in the liver and released into the bloodstream where it participates in oxidative stress regulation and heme binding. The AMBP gene, located on chromosome 9q32, encodes the precursor protein Alpha-1-microglobulin/bikunin precursor (AMBP), which is subsequently processed into the mature proteins Alpha-1-microglobulin and bikunin through proteolytic cleavage.

Alpha 1 Microglobulin antibody, also referred to as AMBP antibody and Alpha-1-microglobulin antibody in the literature, detects a protein that functions as a scavenger of free radicals and heme-derived oxidative molecules. The mature Alpha-1-microglobulin protein is secreted into plasma and extracellular fluids where it binds free heme groups and other oxidized compounds, helping protect tissues from oxidative damage. This antioxidant activity has been implicated in maintaining cellular homeostasis and protecting tissues exposed to oxidative stress.

Alpha-1-microglobulin is filtered by the glomerulus in the kidney and subsequently reabsorbed by proximal tubular epithelial cells. Because of this physiological pathway, Alpha-1-microglobulin is often studied in renal biology and kidney injury research. Increased levels of urinary Alpha-1-microglobulin can reflect tubular dysfunction or impaired protein reabsorption, making the protein a useful marker in studies examining kidney disease and tubular injury mechanisms.

In tissue-based analyses, AMBP-derived proteins are detected in liver hepatocytes where the precursor protein is synthesized, as well as in kidney tubular epithelial cells involved in protein reabsorption. Cytoplasmic staining patterns are consistent with intracellular processing and handling of the secreted protein. In addition to kidney and liver expression, Alpha-1-microglobulin has been detected in several other tissues depending on physiological conditions and circulating protein uptake.

Alpha 1 Microglobulin Antibody Mouse Monoclonal AMBP/4536 supports research applications focused on detecting Alpha-1-microglobulin expression in tissues and biological samples. Cytoplasmic staining patterns correspond with the known synthesis and intracellular handling of AMBP-derived proteins, enabling studies of oxidative stress biology, kidney tubular function, and liver-derived plasma protein production.

For highly specific detection of AMBP-associated plasma glycoprotein signaling pathways, see our AMBP Antibody / Plasma Glycoprotein Marker Antibody page featuring clone AMBP/4533 with IHC and HuProt(TM) microarray specificity validation data.

Application Notes

Optimal dilution of the Alpha 1 Microglobulin antibody mouse monoclonal AMBP/4536 should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 200-353) from the human protein was used as the immunogen for the Alpha 1 Microglobulin antibody.

Storage

Aliquot the Alpha 1 Microglobulin antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.