

AMBP (532): sc-81948

BACKGROUND

The AMBP (α -1-Microglobulin/Bikunin precursor) gene encodes a protein precursor, known as AMBP, that is cleaved to produce two distinct proteins, designated α -1-Microglobulin and Bikunin. α -1-Microglobulin, also known as protein HC, is a member of the lipocalin superfamily and is secreted mainly in plasma, urine and cerebrospinal fluid. Thought to have reductase/dehydrogenase activity, α -1-Microglobulin exhibits immunosuppressive properties, such as cytokine secretion and inhibition of antigen-induced lymphocyte cell proliferation, and may be involved in the reduction of biological pro-oxidants. The second protein cleavage product, designated Bikunin and also known as inter- α -trypsin inhibitor light chain, ITI-LC or urinary trypsin inhibitor, is a widely expressed protein that is stored in the granules of human connective tissue mast cells. One of many proteins in the Kunitz-type protease inhibitor family, Bikunin prevents autodigestion by exocrine enzymes, such as trypsinogen and chymo-trypsinogen, and plays a role in the anti-inflammatory/antiproteinase immune response. Unlike α -1-Microglobulin, Bikunin is implicated in the pathogenesis of a number of renal diseases, such as urolithiasis.

REFERENCES

1. Itoh, H., et al. 1996. Expression of inter- α -trypsin inhibitor light chain (Bikunin) in human pancreas. *J. Biochem.* 120: 271-275.
2. Olsen, E.H., et al. 1998. Posttranslational modifications of human inter- α -inhibitor: identification of glycans and disulfide bridges in heavy chains 1 and 2. *Biochemistry* 37: 408-416.
3. Dawson, C.J., et al. 1998. Inter- α -inhibitor in calcium stones. *Clin. Sci.* 95: 187-193.
4. Ide, H., et al. 1999. Immunohistochemical demonstration of inter- α -trypsin inhibitor light chain (Bikunin) in human mast cells. *Cell Tissue Res.* 297: 149-154.
5. Atmani, F., et al. 1999. Role of inter- α -inhibitor and its related proteins in experimentally induced calcium oxalate urolithiasis. Localization of proteins and expression of Bikunin gene in the rat kidney. *Urol. Res.* 27: 63-67.
6. Balduyck, M., et al. 2000. Inflammation-induced systemic proteolysis of inter- α -inhibitor in plasma from patients with sepsis. *J. Lab. Clin. Med.* 135: 188-198.

CHROMOSOMAL LOCATION

Genetic locus: AMBP (human) mapping to 9q32.

SOURCE

AMBP (532) is a mouse monoclonal antibody raised against recombinant AMBP of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

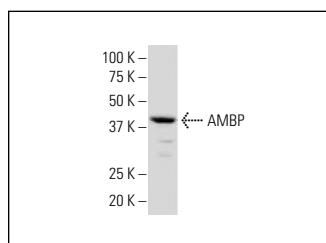
AMBP (532) is recommended for detection of AMBP of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for AMBP siRNA (h): sc-39552, AMBP shRNA Plasmid (h): sc-39552-SH and AMBP shRNA (h) Lentiviral Particles: sc-39552-V.

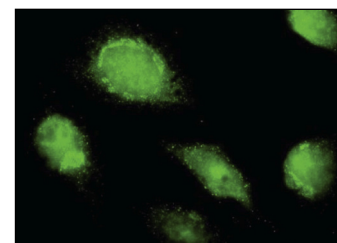
Molecular Weight of AMBP: 30 kDa.

Positive Controls: A549 cell lysate: sc-2413.

DATA



AMBP (532): sc-81948. Western blot analysis of AMBP expression in A549 whole cell lysate.



AMBP (532): sc-81948. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Gertow, J., et al. 2017. Altered protein composition of subcutaneous adipose tissue in chronic kidney disease. *Kidney Int. Rep.* 2: 1208-1218.
2. Hakuno, D., et al. 2018. Hepatokine α 1-microglobulin signaling exacerbates inflammation and disturbs fibrotic repair in mouse myocardial infarction. *Sci. Rep.* 8: 16749.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.