Data Sheet (Cat.No.TMPY-00161)

TargetMol

Bikunin/AMBP Protein, Rat, Recombinant (His)

General Information

Synonyms:	α-1-microglobulin/bikunin precursor;alpha-1-microglobulin/bikunin precursor
Protein Construction:	A DNA sequence encoding the rat Ambp (NP_037033.1) (Met1-Ala202) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Asp 20
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	A6J7X0
Molecular Weight:	22.3 kDa (predicted)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

The AMBP [A1M (alpha1-microglobulin)/bikunin precursor] gene encodes two plasma glycoproteins: A1M, an immunosuppressive lipocalin, and bikunin, a member of plasma serine proteinase inhibitor family with prototypical Kunitz-type domain. Although previously believed to be constitutively expressed exclusively in liver, the present study demonstrates the induction of this gene by oxalate in porcine proximal tubular LLC-PK1 cells and rat kidney. In liver, the precursor protein is cleaved in the Golgi network by a furin-like enzyme to release

constituent proteins, which undergo glycosylation before their export from the cell. In the renal tubular cells, A1M and bikunin co-precipitate, indicating lack of cleavage of the precursor protein. As the expression of the AMBP gene is regulated by A1M-specific cis elements and transcription factors, A1M protein was studied as a representative of AMBP gene expression in renal cells. The alpha(1)-microglobulin/bikunin precursor (AMBP) gene, and its two protein products were studied in mouse embryos of 8.5-15.5 days of embryonic development by in situ hybridization and immunohistochemistry. AMBP mRNA is strongly transcribed in liver parenchyma, pancreas, and intestine epithelium. Sites of weaker expression are the vessels of the umbilical cord, the developing vertebral bodies, and kidney. The alpha(1)-microglobulin and bikunin proteins are accordingly present in developing hepatocytes, pancreas, kidney, and gut. However, additional sites of protein distribution were found that do not correlate to mRNA localization: alpha(1)-microglobulin was found in myocytes and bikunin in cardiac muscle, nervous system microvasculature, and connective tissue

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481