Data Sheet (Cat.No.TMPY-02328)

TargetMol

Uteroglobin Protein, Mouse, Recombinant (His)

General Information

Synonyms:	secretoglobin, family 1A, member 1 (uteroglobin);PCB-BP;CC16;UG;CC10;UGB;Utg;CCSP
Protein Construction:	A DNA sequence encoding the mouse SCGB1A1 (Q06318) (Met 1-Phe 96) was expressed, with a polyhistidine tag at the C-terminus. Predicted N terminal: Asp 22
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q06318
Molecular Weight:	9.8 kDa (predicted); 12 kDa (reducing conditions)

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:	> 88 % 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.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Uteroglobin (UG), also known as Secretoglobin 1A member 1 (SCGB1A1), Blastokinin, Clara cell secretor protein (CCSP) or Clara cell-specific 10-kDa protein (CC10), is the founding member of the secretoglobin family of small, secreted, disulfide-bridged dimeric proteins found only in mammals. This protein is mainly expressed in lung, with anti-inflammatory/immunomodulatory properties. Previous in vitro studies demonstrated that CCAAT/enhancer-binding proteins (C/EBPs) are the major transcription factors for the regulation of SCGB1A1 gene expression,

whereas FOXA1 had a minimum effect on the transcription. Uteroglobin is a multifunctional protein with antiinflammatory/immunomodulatory properties. Uteroglobin inhibits soluble phospholipase A(2) activity and binds and perhaps sequesters hydrophobic ligands such as progesterone, retinols, polychlorinated biphenyls, phospholipids, and prostaglandins. In addition to its antiinflammatory activities, Uteroglobin manifests antichemotactic, antiallergic, antitumorigenic, and embryonic growth-stimulatory activities. The tissue-specific expression of the Uteroglobin gene is regulated by several steroid hormones, although a nonsteroid hormone, prolactin, further augments its expression in the uterus. Based on its anti-inflammatory and antiallergic properties, Uteroglobin is a potential drug target. The mechanism of Uteroglobin action is likely to be even more complex as it also functions via a putative receptor-mediated pathway.

Reference

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