

Mouse Uteroglobin / SCGB1A1 Protein (His Tag)

Catalog Number: 50291-M08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

CC10; CC16; CCPBP; CCSP; UGB; UP-1; UP1; CC10; CC16; CCSP; PCB-BP; UG; UGB; Utg

Protein Construction:

A DNA sequence encoding the mouse SCGB1A1 (Q06318) (Met 1-Phe 96) was expressed, with a polyhistidine tag at the C-terminus.

Source: Mouse

Expression Host: Human Cells

QC Testing

Purity: > 88 % as determined by SDS-PAGE

Bio Activity:

Measured by the ability of the immobilized protein to support the adhesion of the A549 human lung carcinoma cell line. When 5×10^4 cells/well are added to SCGB1A1 coated plates (5 µg/ml with 100 µl/well), approximately >40% will adhere after 1 hour at 37°C.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Asp 22

Molecular Mass:

The recombinant mouse SCGB1A1 consists of 86 amino acids and has a predicted molecular mass of 9.8 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rm SCGB1A1 is approximately 12 kDa.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

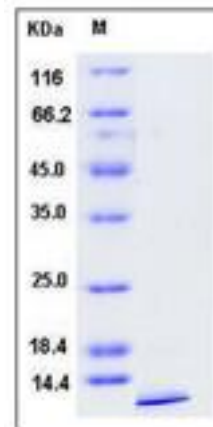
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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 secretoglobins 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.

References

1. Mukherjee AB, *et al.* (1999). Uteroglobin: a novel cytokine? *Cell Mol Life Sci.* 55(5): 771-87.
2. Klug J, *et al.* (2000). Uteroglobin/Clara cell 10-kDa family of proteins: nomenclature committee report. *Ann. N. Y. Acad. Sci.* 923: 348-54.
3. Laukaitis CM, *et al.* (2005). Evolution of the secretoglobins: a genomic and proteomic view. *Biological Journal of the Linnean Society.* 84 (3): 493-501.

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Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>