



# Recombinant Protein Technical Manual

## Recombinant Human Uteroglobin/SCGB1A1 Protein (His Tag)(Active) RPES0799

### Product Data:

**Product SKU:** RPES0799

**Size:** 50µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** P11684

### Protein Information:

**Molecular Mass:** 9.2 kDa

**AP Molecular Mass:** 9.2 kDa

**Tag:** C-His

**Bio-activity:** Measured by the ability of the immobilized protein to support the adhesion of the A549 human lung carcinoma cell line. When  $5 \times 10^4$  cells/well are added to human SCGB1A1 coated plates (2 µg/ml and 100 µl/well), approximately >30% will adhere after one hour at 37 °C.

**Purity:** > 97 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** Uteroglobin; Clara cell phospholipid-binding protein; CCPBP; Clara cells 10 kDa secretory protein; CC10; Secretoglobin family 1A member 1; Urinary protein 1; UP; UP1; Urine protein 1; SCGB1A1; CCSP; UGB

## Immunogen Information:

**Sequence:** Met 1-Asn 91

## 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.