# SANTA CRUZ BIOTECHNOLOGY, INC.

# UGRP2 (M-14): sc-49566



## BACKGROUND

Uteroglobin proteins (UGRPs) are members of the uteroglobin/Clara cell secretory protein family, officially termed secretoglobins, that bind specifically to progesterone with high affinity. UGRP functions to regulate the concentration of progesterone that is targeting the blastocyst. UGRP2, also referred to as high in normal-1 (HIN-1) or secretoglobin 3A1, acts as a potential growth inhibitory cytokine and is highly expressed in the human trachea, followed by salivary gland, lung and mammary gland. Expression of UGRP2 is increased by retinoic acid, thereby causing mucinous differentiation in primary human bronchial epithelial cells. UGRP2 may also have a role in regulating the terminally differentiated proximal epithelial airway. UGRP2 expression is enhanced by interleukin (IL)-4 and IL-13 through Stat6 binding to the proximal Statbinding element that resides in the promoter of the UGRP2 gene. Mutations in the UGRP2 gene, especially silencing with methylation, are found in the majority of breast carcinomas.

#### REFERENCES

- 1. Niimi, T., et al. 2002. Cloning, expression, and chromosomal localization of the mouse gene (Scgb3a1, alias UGRP2) that encodes a member of the novel uteroglobin-related protein gene family. Cytogenet. Genome Res. 97: 120-127.
- 2. Reynolds, S.D., et al. 2002. Secretoglobins SCGB3A1 and SCGB3A2 define secretory cell subsets in mouse and human airways. Am. J. Respir. Crit. Care Med. 166: 1498-1509.
- 3. Silver, D.P., et al. 2003. HIN-1 and the nosology of breast cancer. Cancer Biol. Ther. 2: 564-565.
- 4. Krop, I., et al. 2004. Frequent HIN-1 promoter methylation and lack of expression in multiple human tumor types. Mol. Cancer Res. 2: 489-494.
- 5. Marchetti, A. et al. 2004. Down regulation of high in normal-1 (HIN-1) is a frequent event in stage I non-small cell lung cancer and correlates with poor clinical outcome. Clin. Cancer Res. 10: 1338-1343.
- 6. Lehmann, U. et al. 2005. Distinct methylation patterns of benign and malignant liver tumors revealed by quantitative methylation profiling. Clin. Cancer Res. 11: 3654-3660.
- 7. Shigematsu, H. et al. 2005. Aberrant methylation of HIN-1 (high in normal-1) is a frequent event in many human malignancies. Int. J. Cancer 113: 600-604.
- 8. Yamada, A. and Kimura, S. 2005. Induction of uteroglobin-related protein 2 (UGRP2) expression by EGF and TGF $\alpha$ . FEBS Lett. 579: 2221-2225.

#### CHROMOSOMAL LOCATION

Genetic locus: SCGB3A1 (human) mapping to 5q35; Scgb3a1 (mouse) mapping to 11 B1.2.

# SOURCE

UGRP2 (M-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of UGRP2 of mouse origin.

# PRODUCT

Each vial contains 200 µg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-49566 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

# **APPLICATIONS**

UGRP2 (M-14) is recommended for detection of UGRP2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 UGRP2 siRNA (m): sc-61757, UGRP2 shRNA Plasmid (m): sc-61757-SH and UGRP2 shRNA (m) Lentiviral Particles: sc-61757-V.

Molecular Weight of UGRP2: 10 kDa.

Positive Controls: rat lung extract: sc-2396.

# **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

#### DATA



UGRP2 (M-14): sc-49566. Western blot analysis of UGRP2 expre sion in rat lung tissue extract

#### **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.