

CC10 (98-G): sc-130411



The Power to Question

BACKGROUND

Clara cell 10 (CC10) protein, a homolog of rabbit uteroglobin, is a phosphodiesterase A2 inhibitor. CC10 is regulated by AP-1, octamer and hepatocyte nuclear factor-3 (HNF-3) family transcription factors. CC10 expression changes in relation to the ovarian menstrual cycle, and expression in human endometrium may be stimulated by progesterone, suggesting that CC10 may regulate eicosanoid levels in the human uterus. CC10 is expressed in the lung in non-ciliated airway epithelial cells and in urogenital secretions. CC10 is involved in modulating inflammation in airway passages and may play a role in asthma. Overexpression of CC10 in the non-small cell lung cancer cell line A549 was shown to result in the near absence of MMP-2 and MMP-9 matrix metalloproteinases and a reduction in invasiveness, indicating that loss of CC10 may contribute to carcinogenesis.

REFERENCES

- Hagen, G., et al. 1990. Tissue-specific expression, hormonal regulation and 5'-flanking gene region of the rat Clara cell 10 kDa protein: comparison to rabbit uteroglobin. *Nucleic Acids Res.* 18: 2939-2946.
- Singh, G., et al. 1990. Clara cell 10 kDa protein (CC10): comparison of structure and function to uteroglobin. *Biochim. Biophys. Acta* 1039: 348-355.
- Bernard, A., et al. 1992. Human urinary protein 1: evidence for identity with the Clara cell protein and occurrence in respiratory tract and urogenital secretions. *Clin. Chim. Acta* 207: 239-249.
- Sawaya, P.L., et al. 1993. The lung-specific CC10 gene is regulated by transcription factors from the AP-1, octamer, and hepatocyte nuclear factor 3 families. *Mol. Cell. Biol.* 13: 3860-3871.

CHROMOSOMAL LOCATION

Genetic locus: SCGB1A1 (human) mapping to 11q12.3.

SOURCE

CC10 (98-G) is a mouse monoclonal antibody raised against recombinant CC10 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CC10 (98-G) is recommended for detection of CC10 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 CC10 siRNA (h): sc-29954, CC10 shRNA Plasmid (h): sc-29954-SH and CC10 shRNA (h) Lentiviral Particles: sc-29954-V.

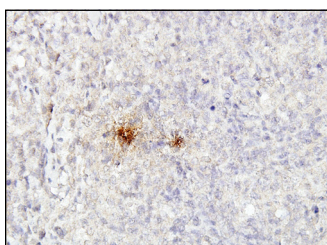
Molecular Weight of CC10: 10 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 2) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CC10 (98-G): sc-130411. Immunoperoxidase staining of formalin-fixed, paraffin-embedded malignant lymphoma, diffuse large B-cell tissue showing extracellular localization.

SELECT PRODUCT CITATIONS

- Matsumoto, S., et al. 2012. Expression analysis of the regenerating gene (Reg) family members Reg-IIIβ and Reg-IIIγ in the mouse during development. *J. Comp. Neurol.* 520: 479-494.
- Davis, A.S., et al. 2015. Validation of normal human bronchial epithelial cells as a model for influenza A infections in human distal trachea. *J. Histochem. Cytochem.* 63: 312-328.
- Kim, M., et al. 2019. Patient-derived lung cancer organoids as *in vitro* cancer models for therapeutic screening. *Nat. Commun.* 10: 3991.
- Rao, W., et al. 2020. Protocol for cloning epithelial stem cell variants from human lung. *STAR Protoc.* 1: 100063.
- Chen, S.Y. and Liu, F.C. 2023. The Fgf9-Nol3-1-Wnt2 axis regulates morphogenesis of the lung. *Development* 150: dev201827.

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.



See **CC10 (E-11): sc-365992** for CC10 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.