

# ANO1 (C-5): sc-377115

## BACKGROUND

ANO1 (anoctamin 1), also known as DOG1, ORAOV2, TAOS2 or TMEM16A, is a 986 amino acid multi-pass membrane protein that localizes to both the cell membrane and the cytoplasm and belongs to the anoctamin family. Expressed in a variety of tissues with highest expression in liver, gastrointestinal muscle and skeletal muscle, ANO1 functions as a calcium-activated chloride channel that is required for normal tracheal development. Human ANO1 shares 90% sequence identity with its mouse counterpart, suggesting a conserved role between species. ANO1 is present in breast, pancreatic, gastric, and uterine cancers, as well as in neck, ovarian and parathyroid tumors, suggesting a role for ANO1 in carcinogenesis. Three isoforms of ANO1 exist due to alternative splicing events.

## CHROMOSOMAL LOCATION

Genetic locus: ANO1 (human) mapping to 11q13.3.

## SOURCE

ANO1 (C-5) is a mouse monoclonal antibody raised against amino acids 182-222 mapping within an internal region of TMEM16A of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ANO1 (C-5) is available conjugated to agarose (sc-377115 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377115 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377115 PE), fluorescein (sc-377115 FITC), Alexa Fluor® 488 (sc-377115 AF488), Alexa Fluor® 546 (sc-377115 AF546), Alexa Fluor® 594 (sc-377115 AF594) or Alexa Fluor® 647 (sc-377115 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377115 AF680) or Alexa Fluor® 790 (sc-377115 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

ANO1 (C-5) is recommended for detection of ANO1 of human origin by Western Blotting (starting dilution 1:100, 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), 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 ANO1 siRNA (h): sc-76686, ANO1 shRNA Plasmid (h): sc-76686-SH and ANO1 shRNA (h) Lentiviral Particles: sc-76686-V.

Molecular Weight of ANO1: 114 kDa.

Positive Controls: human skeletal muscle extract: sc-363776.

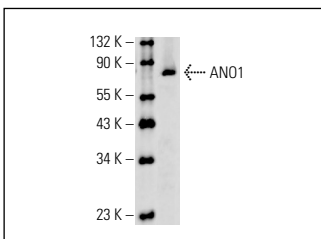
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

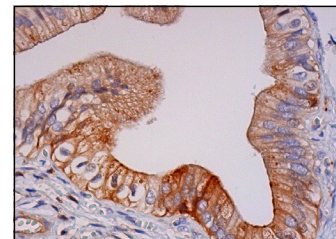
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



ANO1 (C-5) HRP: sc-377115 HRP. Direct western blot analysis of ANO1 expression in human skeletal muscle tissue extract. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-HRP: sc-516732.



ANO1 (C-5): sc-377115. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing membrane and cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Sala-Rabanal, M., et al. 2015. Secreted CLCA1 modulates TMEM16A to activate Ca<sup>2+</sup>-dependent chloride currents in human cells. *Elife* 4: e05875.
2. Sharma, A., et al. 2018. CLCA2 is a positive regulator of store-operated calcium entry and TMEM16A. *PLoS ONE* 13: e0196512.
3. Li, Q., et al. 2018. Bile acids stimulate cholangiocyte fluid secretion by activation of transmembrane member 16A Cl<sup>-</sup> channels. *Hepatology* 68: 187-199.
4. Cordero-Martínez, J., et al. 2018. TMEM16A inhibition impedes capacitation and acquisition of hyperactivated motility in guinea pig sperm. *J. Cell. Biochem.* 119: 5944-5959.
5. Jiang, Y., et al. 2019. MicroRNA-144 suppresses aggressive phenotypes of tumor cells by targeting ANO1 in colorectal cancer. *Oncol. Rep.* 41: 2361-2370.
6. Sim, K.M., et al. 2020. Suppression of CaMKIIβ inhibits ANO1-mediated glioblastoma progression. *Cells* 9: 1079.
7. Yebra, M., et al. 2022. Establishment of patient-derived succinate dehydrogenase-deficient gastrointestinal stromal tumor models for predicting therapeutic response. *Clin. Cancer Res.* 28: 187-200.
8. Chueh, K.S., et al. 2024. Low-intensity extracorporeal shock wave therapy ameliorates detrusor hyperactivity with impaired contractility via transient potential vanilloid channels: a rat model for ovarian hormone deficiency. *Int. J. Mol. Sci.* 25: 4927.
9. Martínez-Magaña, C.J., et al. 2024. Spinal bestrophin-1 and anoctamin-1 channels have a pronociceptive role in the tactile allodynia induced by REM sleep deprivation in rats. *Brain Res.* 1834: 148915.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.