

# ANO2 (H-73): sc-292004

## BACKGROUND

ANO2 (anoctamin 2), also known as TMEM16B or C12orf3, is a 1,003 amino acid multi-pass membrane protein that shares 54% sequence similarity with TMEM16A, a related family member in the anoctamin family. ANO2 is expressed in retina (especially in the photoreceptor synaptic terminals) and functions as a calcium-activated chloride channel (CaCC) that may be involved in light perception amplification. Defects in the gene encoding ANO2 may be associated with von Willebrand disease type 3, an inherited autosomal recessive disorder that is characterized by errors in platelet adhesion. The gene encoding ANO2 maps to chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and Trisomy 12p, which causes facial developmental defects and seizure disorders. Two isoforms of ANO2 exist due to alternative splicing events.

## REFERENCES

1. Katoh, M. and Katoh, M. 2003. FLJ10261 gene, located within the CCND1-EMS1 locus on human chromosome 11q13, encodes the eight-transmembrane protein homologous to C12orf3, C11orf25 and FLJ34272 gene products. *Int. J. Oncol.* 22: 1375-1381.
2. Katoh, M. and Katoh, M. 2004. Identification and characterization of TMEM16E and TMEM16F genes in silico. *Int. J. Oncol.* 24: 1345-1349.
3. Segel, R., Peter, I., Demmer, L.A., Cowan, J.M., Hoffman, J.D. and Bianchi, D.W. 2006. The natural history of Trisomy 12p. *Am. J. Med. Genet. A* 140: 695-703.
4. Schneppenheim, R., Castaman, G., Federici, A.B., Kreuz, W., Marschalek, R., Oldenburg, J., Oyen, F. and Budde, U. 2007. A common 253 kb deletion involving VWF and TMEM16B in German and Italian patients with severe von Willebrand disease type 3. *J. Thromb. Haemost.* 5: 722-728.
5. Rock, J.R. and Harfe, B.D. 2008. Expression of TMEM16 paralogs during murine embryogenesis. *Dev. Dyn.* 237: 2566-2574.

## CHROMOSOMAL LOCATION

Genetic locus: ANO2 (human) mapping to 12p13.31; Ano2 (mouse) mapping to 6 F3.

## SOURCE

ANO2 (H-73) is a rabbit polyclonal antibody raised against amino acids 931-1003 mapping at the C-terminus of ANO2 of human origin.

## PRODUCT

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

## STORAGE

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

## APPLICATIONS

ANO2 (H-73) is recommended for detection of ANO2 of mouse, rat and human 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), 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).

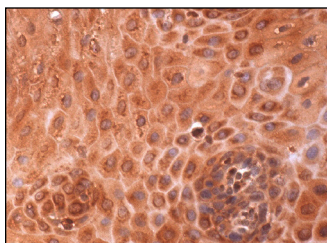
Suitable for use as control antibody for ANO2 siRNA (h): sc-96091, ANO2 siRNA (m): sc-154400, ANO2 shRNA Plasmid (h): sc-96091-SH, ANO2 shRNA Plasmid (m): sc-154400-SH, ANO2 shRNA (h) Lentiviral Particles: sc-96091-V and ANO2 shRNA (m) Lentiviral Particles: sc-154400-V.

Molecular Weight of ANO2: 114 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



ANO2 (H-73): sc-292004. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic and nuclear staining of squamous epithelial cells.

## RESEARCH USE

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

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Try **ANO2 (D-2): sc-390956**, our highly recommended monoclonal alternative to ANO2 (H-73).