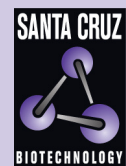


ANO2 (D-2): sc-390956



The Power to Question

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., et al. 2006. The natural history of Trisomy 12p. *Am. J. Med. Genet. A* 140A: 695-703.
4. Schneppenheim, R., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: ANO2 (human) mapping to 12p13.31.

SOURCE

ANO2 (D-2) is a mouse monoclonal antibody raised against amino acids 931-1003 mapping at the C-terminus of ANO2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ANO2 (D-2) is available conjugated to agarose (sc-390956 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390956 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390956 PE), fluorescein (sc-390956 FITC), Alexa Fluor® 488 (sc-390956 AF488), Alexa Fluor® 546 (sc-390956 AF546), Alexa Fluor® 594 (sc-390956 AF594) or Alexa Fluor® 647 (sc-390956 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390956 AF680) or Alexa Fluor® 790 (sc-390956 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ANO2 (D-2) is recommended for detection of ANO2 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) 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 shRNA Plasmid (h): sc-96091-SH and ANO2 shRNA (h) Lentiviral Particles: sc-96091-V.

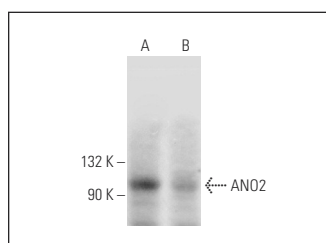
Molecular Weight of ANO2: 114 kDa.

Positive Controls: ARPE-19 whole cell lysate: sc-364357 or Y79 cell lysate: sc-2240.

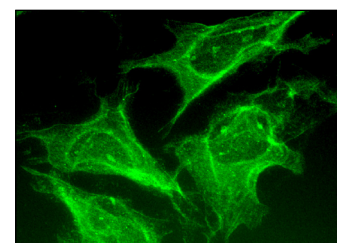
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 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.

DATA



ANO2 (D-2): sc-390956. Western blot analysis of ANO2 expression in ARPE-19 (A) and Y79 (B) whole cell lysates.



ANO2 (D-2): sc-390956. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.