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Anti-TMEM16A Antibody

Catalog # ABO11599

Product Information

Application	WB
Primary Accession	Q5XXA6
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Anoctamin-1(ANO1) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	55107
Other Names	Anoctamin-1, Discovered on gastrointestinal stromal tumors protein 1, Oral cancer overexpressed protein 2, Transmembrane protein 16A, Tumor-amplified and overexpressed sequence 2, ANO1, DOG1, ORAOV2, TAOS2, TMEM16A
Calculated MW	114078
Application Details	Western blot, 0.1-0.5 □g/ml, Rat, Human, Mouse
Subcellular Localization	Cell membrane; Multi-pass membrane protein. Cytoplasm. Cytoplasmic localization seen in neoplastic cells of head and neck squamous cell carcinoma (HNSCC) tumors.
Tissue Specificity	Broadly expressed with higher levels in liver, skeletal muscle and gastrointestinal muscles. .
Source	Eukaryota
Protein Name	Anoctamin-1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human TMEM16A(927-943aa KVLMVELFMREEQDKQQ), different from the related mouse and rat sequences by one amino acid.
Purification	Immunogen affinity purified.

Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Protein Information

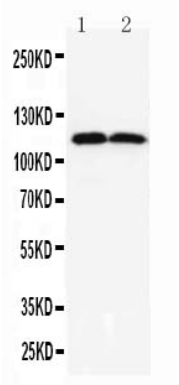
Name	ANO1
Function	Calcium-activated chloride channel (CaCC) (PubMed: 20056604, PubMed:22178883, PubMed:22946059, PubMed:32487539). Plays a role in transepithelial anion transport and smooth muscle contraction. Required for the normal functioning of the interstitial cells of Cajal (ICCs) which generate electrical pacemaker activity in gastrointestinal smooth muscles. Acts as a major contributor to basal and stimulated chloride conductance in airway epithelial cells and plays an important role in tracheal cartilage development. Required for CFTR activation by enhancing endoplasmic reticulum Ca(2+) store release and is also required for CFTR membrane expression (PubMed:28963502). Required for basal and ATP-dependent mucus secretion in airways and intestine, probably by controlling exocytosis of mucus-filled granules by providing Ca(2+) to an apical signaling compartment (By similarity). Contributes to airway mucus expression induced by interleukins IL3 and IL8 and by the asthma-associated protein CLCA1 and is required for expression of mucin MUC5AC (PubMed:33026825). However, was shown in another study not to be required for MUC5AC expression (PubMed:31732694). Plays a role in the propagation of Ca(2+) waves in Kolliker's organ in the cochlea and contributes to the refinement of auditory brainstem circuitries prior to hearing onset (By similarity). In vomeronasal sensory neurons, modulates spontaneous firing patterns in the absence of stimuli as well as the firing pattern of pheromone- evoked activity (By similarity). Responsible for calcium-activated chloride channel activity in type I taste cells of the vallate papillae (By similarity). Acts as a heat sensor in nociceptive neurons (By similarity). In dorsal root ganglion neurons, plays a role in mediating non-histaminergic Mas-related G protein-coupled receptor (MRGPR)- dependent itching, acting as a downstream effector of MRGPRs (By similarity). In the developing brain, required for the Ca(2+)-dependent process extension of radial glial cells (By similarity).
Cellular Location	Apical cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q8BHY3}. Presynapse {ECO:0000250|UniProtKB:Q8BHY3}. Note=In differentiating airway epithelial cells, predominantly intracellular at day 0 but is apically localized by day 30. Expressed in the presynapse of retinal neurons (By similarity). {ECO:0000250|UniProtKB:Q8BHY3}
Tissue Location	Expressed in nasal epithelial cells (at protein level) (PubMed:32487539). In the kidney, expressed in the collecting duct (at protein level) (PubMed:24913262). Broadly expressed with higher levels in liver, skeletal muscle and gastrointestinal muscles (PubMed:15215166, PubMed:16906560). Expressed in eccrine sweat glands (PubMed:25220078).

Background

Anoctamin-1(ANO1), also known as oral cancer overexpressed 2(ORAOV2) or tumor-amplified and overexpressed sequence 2(TMEM16A), is a protein that in humans is encoded by the ANO1 gene. This gene belongs to a family of membrane proteins containing 8 transmembrane segments, and it is mapped to 11q13.3. ANO1 is a candidate calcium-activated chloride channel that mediates receptor-activated chloride

currents in diverse physiologic processes, and it is though to be responsible for a voltage-sensitive calcium-activated chloride current. Its overexpression was reported in esophageal squamous cell carcinoma and breast cancer progression Crofelemer, an antidiarrhoeal, inhibits this channel. ANO1 has eight transmembrane domains, its pore is large and non-selective, allowing other negatively charged species to permeate.

Images



Anti-TMEM16A antibody, ABO11599, All Western blottingAll lanes: Anti-ANO1(ABO11599) at 0.5ug/mlLane 1: Rat Liver Tissue Lysate at 40ugLane 2: Rat Skeletal Muscle Tissue Lysate at 40ugPredicted bind size: 114KDObserved bind size: 114KD

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