DOG-1 recombinant protein

CatalogNo: YD3040

Key Features

Reactivity
- Human

Recommended Dilution Ratios

Storage

Storage*	-15°C to -25°C/1 year(Avoid freeze / thaw cycles)
Formulation	Phosphate-buffered solution

Basic Information

Source	Mammalian cells
Purification	Mammalian cells
Purity	>90% as determined by SDS-PAGE

Immunogen Information

Squence	Amino acid:1-116,with human FC tag.

Target Information

Gene name	ANO1

Protein Name Anoctamin-1 (Discovered on gastrointestinal stromal tumors protein 1) (Oral cancer overexpressed protein 2) (Transmembrane protein 16A) (Tumor-amplified and overexpressed sequence 2)

Organism	Gene ID	UniProt ID
Human	55107;	Q5XXA6;

Cellular Localization Apical cell membrane ; Multi-pass membrane protein . Presynapse . 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). .

Tissue specificity 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).

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).; [Isoform 4]: Calcium-activated chloride channel (CaCC). Contributes to calcium-activated chloride secretion in human sweat gland epithelial cells. Shows increased basal chloride permeability and decreased Ca(2+)-induced chloride permeability.; [Isoform 5]: Calcium-activated chloride channel (CaCC). Shows increased sensitivity to intracellular Ca(2+).

Validation Data

Contact information

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Please scan the QR code to access additional product information:
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