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TRPV5 Rabbit pAb

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Catalog # AP59028

Product Information

Primary Accession	Q9NQA5
Reactivity	Human
Predicted	Mouse, Rat, Dog, Pig, Horse, Rabbit, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	82562
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human TRPV5
Epitope Specificity	201-300/729
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Apical cell membrane. Colocalized with S100A10 and ANAX2 along the apical domain of kidney distal tubular cells (By similarity). The expression of the glycosylated form in the cell membrane is increased in the presence of WNK3.
SIMILARITY	Belongs to the transient receptor (TC 1.A.4) family. TrpV subfamily. TRPV5 sub-subfamily.Contains 5 ANK repeats.
SUBUNIT	Homotetramer and probably heterotetramer with TRPV6. Interacts with TRPV6. Interacts with S100A10 and probably with the ANAX2-S100A10 heterotetramer. The interaction with S100A10 is required for the trafficking to the plasma membrane. Interacts with calmodulin. Interacts with BSPRY, which results in its inactivation (By similarity).
Post-translational modifications	Glycosylated.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Transient receptor potential (TRP) proteins are cation-sensitive channels that modulate a myriad of cellular functions, including temperature sensation and vasoregulation Transcribed from a gene adjacent to VR-1, the thermal-sensitive, capsaicin-insensitive TRPV3 is expressed at warm temperatures; expression increases in response to noxious temperatures. Human TRPV3 is expressed in skin, tongue, dorsal root ganglion, trigeminal ganglion, spinal cord and brain. In addition, TRPV3 is co-expressed in dosal root ganglion neurons with VR-1. TRPV3 associates with VR-1 and may modulate VR-1 activity. The 729 amino acid TRPV5 (ECAC1) protein comprises six transmembrane domains, multiple potential phosphorylation sites, an N-linked glycosylation site and three ankyrin repeat regions. It is abundantly expressed in kidney, jejunum and pancreas, and at lower levels in testis, prostate, placenta, brain, colon and rectum. TRPV5 controls the rate-limiting step of vitamin D3-regulated Ca2+ reabsorption in kidney and intestine; the 5′-flanking region of TRPV5 contains four putative vitamin D3-responsive elements.

Additional Information

Gene ID	56302
Other Names	Transient receptor potential cation channel subfamily V member 5, TrpV5, Calcium transport protein 2, CaT2, Epithelial calcium channel 1, ECaC, ECaC1, Osm-9-like TRP channel 3, OTRPC3, TRPV5, ECAC1 {ECO:0000303|PubMed:10945469}
Target/Specificity	Expressed at high levels in kidney, small intestine and pancreas, and at lower levels in testis, prostate, placenta, brain, colon and rectum.
Dilution	Flow-Cyt=1 □g/Test
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

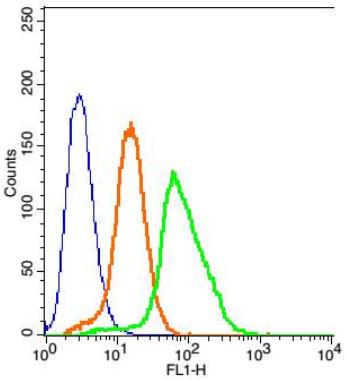
Name	TRPV5
Synonyms	ECAC1 {ECO:0000303|PubMed:10945469}
Function	Constitutively active calcium selective cation channel thought to be involved in Ca(2+) reabsorption in kidney and intestine (PubMed:11549322, PubMed:18768590). Required for normal Ca(2+) reabsorption in the kidney distal convoluted tubules (By similarity). The channel is activated by low internal calcium level and the current exhibits an inward rectification (PubMed:11549322, PubMed:18768590). A Ca(2+)-dependent feedback regulation includes fast channel inactivation and slow current decay (By similarity). Heteromeric assembly with TRPV6 seems to modify channel properties. TRPV5-TRPV6 heteromultimeric concatemers exhibit voltage-dependent gating (By similarity).
Cellular Location	Apical cell membrane; Multi-pass membrane protein. Note=Colocalized with S100A10 and ANAX2 along the apical domain of kidney distal tubular cells (By similarity) The expression of the glycosylated form in the cell membrane is increased in the presence of WNK3 (PubMed:18768590) {ECO:0000250|UniProtKB:P69744, ECO:0000269|PubMed:18768590}
Tissue Location	Expressed at high levels in kidney, small intestine and pancreas, and at lower levels in testis, prostate, placenta, brain, colon and rectum.

Background

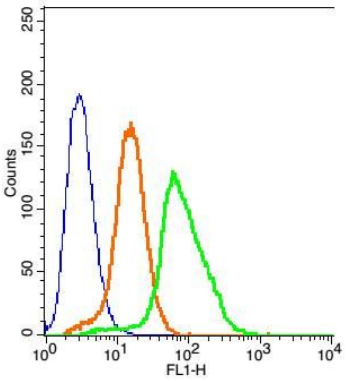
Transient receptor potential (TRP) proteins are cation-sensitive channels that modulate a myriad of cellular functions, including temperature sensation and vasoregulation Transcribed from a gene adjacent to VR-1, the thermal-sensitive, capsaicin-insensitive TRPV3 is expressed at warm temperatures; expression increases in response to noxious temperatures. Human TRPV3 is expressed in skin, tongue, dorsal root ganglion, trigeminal ganglion, spinal cord and brain. In addition, TRPV3 is co-expressed in dosal root ganglion neurons with VR-1. TRPV3 associates with VR-1 and may modulate VR-1 activity. The 729 amino acid TRPV5 (ECAC1) protein comprises six transmembrane domains, multiple potential phosphorylation sites, an N-linked glycosylation site and three ankyrin repeat regions. It is abundantly expressed in kidney, jejunum and pancreas, and at lower levels in testis, prostate, placenta, brain, colon and rectum. TRPV5 controls the

rate-limiting step of vitamin D3-regulated Ca2+ reabsorption in kidney and intestine; the 5’-flanking region of TRPV5 contains four putative vitamin D3-responsive elements.

Images



Blank control(blue): 293T Cells(fixed with 2% paraformaldehyde (10 min)). Primary Antibody: Rabbit Anti-TRPV5/AF488 Conjugated antibody (AP59028-AF488), Dilution: 1 µg in 100 µL 1X PBS containing 0.5% BSA; Isotype Control Antibody: Rabbit IgG/AF488(orange) ,used under the same conditions.



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