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TRPC6 Antibody

Catalog # ASC10450

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9Y210
Other Accession	AAH93658, 62739910
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	106326
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TRPC6 antibody can be used for the detection of TRPC6 by Western blot at 0.5 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 10 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	7225
Other Names	TRPC6 Antibody: TRP6, FSGS2, TRP6, Short transient receptor potential channel 6, Transient receptor protein 6, TrpC6, transient receptor potential cation channel, subfamily C, member 6
Target/Specificity	TRPC6; This antibody may cross-react with TRPC3.
Reconstitution & Storage	TRPC6 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	TRPC6 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TRPC6 {ECO:0000303|PubMed:9930701, ECO:0000312|HGNC:HGNC:12338}
Function	Non-selective, calcium-permeable cation channel (PubMed: 19936226, PubMed:23291369, PubMed:26892346, PubMed:9930701). Mediates calcium entry following G(q)-coupled receptor or receptor tyrosine kinase activation, which triggers phospholipase C (PLC)- mediated hydrolysis of phosphatidylinositides and production of diacylglycerol (DAG) that directly activates TRPC6 (PubMed:26892346). Does not appear to be activated by depletion of intracellular calcium stores (PubMed:9930701). Mediates depolarization of intrinsically photosensitive retinal ganglion cells (ipRGCs) in

	response to light- induced melanopsin (OPN4)-mediated phototransduction via G(q)-PLC signaling, likely by forming heteromeric TRPC6-TRPC7 channels (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein
Tissue Location	Expressed primarily in placenta, lung, spleen, ovary and small intestine. Expressed in podocytes and is a component of the glomerular slit diaphragm.

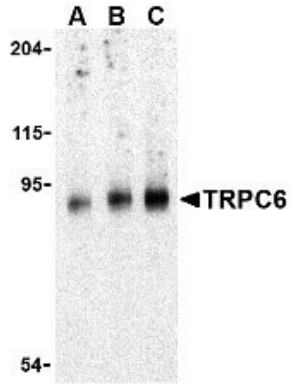
Background

TRPC6 Antibody: The mammalian transient receptor potential (TRP) superfamily can be divided into three major families including the "canonical TRP" (TRPC) family. The seven members of this family share the activation through PLC-coupled receptors and have been suggested to be components of receptor-regulated cation channels in different cell types. Furthermore, the members of the TRPC6/6/7 subfamily can be activated by diacylglycerol (DAG) analogs, suggesting a possible mechanism of activation of these channels by PLC-coupled receptors. When expressed in transfected cells, TRPC6 acts as a non-selective store-independent receptor-activated cation channel. It is activated by DAG in a PKC-independent manner and is insensitive to IP3 activation. There is increasing evidence that TRPC6 encodes endogenous DAG-activated receptor-operated cation channels in vivo.

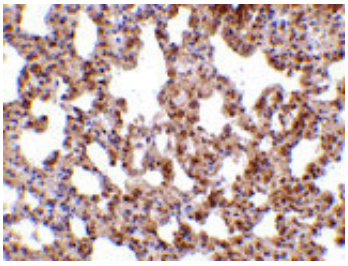
References

Contell C, Birnbaumer V, Flockerzi V, et al. A unified nomenclature for the superfamily of TRP cation channels. Mol. Cell 2002; 9:229-31.
Dietrich A, Kalwa H, Rost BR, et al. The diacylglycerol-sensitive TRPC6/6/7 subfamily of cation channels: functional characterization and physiological relevance. Pflugers Arch. 2005; 451:72-80.
Trebak M, Vazquez G, Bird GSJ, et al. The TRPC6/6/7 subfamily of cation channels. Cell Calcium 2003; 33:451-61

Images

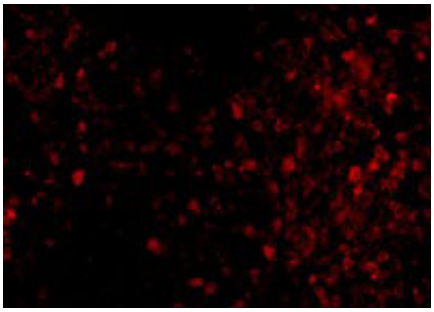


Western blot analysis of TRPC6 in mouse lung tissue lysate with TRPC6 antibody at (A) 0.5, (B) 1 and (C) 2 µg/mL.



Immunohistochemistry of TRPC6 in mouse lung tissue with TRPC6 antibody at 10 µg/mL.

Immunofluorescence of TRPC6 in Mouse Lung cells with



TRPC6 antibody at 20 µg/mL.

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