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Anti-TRPM5 Picoband Antibody

Catalog # ABO12589

Product Information

Application	WB, IHC-P
Primary Accession	Q9NZQ8
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Transient receptor potential cation channel subfamily M member 5(TRPM5) detection. Tested with WB, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	29850
Other Names	Transient receptor potential cation channel subfamily M member 5, Long transient receptor potential channel 5, LTrpC-5, LTrpC5, MLSN1- and TRP-related gene 1 protein, TRPM5 (HGNC:14323)
Calculated MW	131451
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Human
Subcellular Localization	Cell membrane ; Multi-pass membrane protein .
Tissue Specificity	Strongly expressed in fetal brain, liver and kidney, and in adult prostate, testis, ovary, colon and peripheral blood leukocytes. Also expressed in a large proportion of Wilms' tumors and rhabdomyosarcomas. In monochromosomal cell lines shows exclusive paternal expression. .
Source	Eukaryota
Protein Name	Transient receptor potential cation channel subfamily M member 5
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E.coli-derived human TRPM5 recombinant protein (Position: S1021-Q1108). Human TRPM5 shares 87.5% amino acid (aa) sequence identity with mouse TRPM5.

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

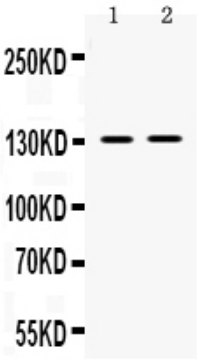
Name	TRPM5 (HGNC:14323)
Function	Monovalent cation-selective ion channel activated by intracellular Ca(2+) in a voltage- and temperature-dependent manner (PubMed:14634208). Mediates the transport of Na(+), K(+) and Cs(+) ions equally well (PubMed:14634208). Activated directly by increase in intracellular Ca(2+), but is impermeable to it (PubMed:14634208). The activation mechanism of TRPM5 involves a multistep process. TRPM5 activation involves ligand binding (i.e., tastant molecule, glucose stimulation) to Gq/G protein-coupled receptors (GPCR) and leads to the breakdown of phosphatidylinositol bisphosphate (PIP2) into diacylglycerol (DAG) and inositol trisphosphate (IP3), IP3 binds to its receptors in the endoplasmic reticulum and cause calcium release. Simultaneously with the intracellular Ca(2+) release, DAG activates the protein kinase C (PKC), which phosphorylates the TRPM5 channel. This phosphorylation combined with the bound Ca(2+), leads to a robust inward current allowing the entry of sodium ions (Na+) into the cell. This ion influx depolarizes the cell membrane, generating action potentials that propagate TRPM5 signals. Is a key player in sensing sweet, umami and bitter stimuli (By similarity). Involved in insulin secretion by pancreatic beta cells (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:S5UH55}
Tissue Location	Strongly expressed in fetal brain, liver and kidney, and in adult prostate, testis, ovary, colon and peripheral blood leukocytes. Also expressed in a large proportion of Wilms' tumors and rhabdomyosarcomas. In monochromosomal cell lines shows exclusive paternal expression.

Background

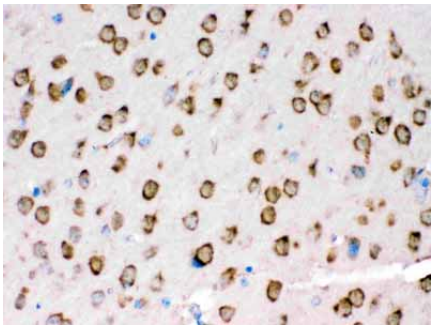
Transient receptor potential cation channel subfamily M member 5 (TRPM5) is a protein that in humans is encoded by the TRPM5 gene. This gene encodes a member of the transient receptor potential (TRP) protein family, which is a diverse group of proteins with structural features typical of ion channels. This protein plays an important role in taste transduction, and has characteristics of a calcium-activated, non-selective cation channel that carries Na+, K+, and Cs+ ions equally well, but not Ca(2+) ions. It is activated by lower concentrations of intracellular Ca(2+), and inhibited by higher concentrations. It is also a highly temperature-sensitive, heat activated channel showing a steep increase of inward currents at temperatures between 15 and 35 degrees Celsius. This gene is located within the Beckwith-Wiedemann syndrome critical region-1 on chromosome 11p15.5, and has been shown to be imprinted, with exclusive expression from the paternal allele.

Images

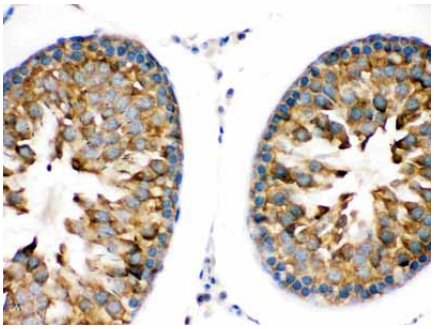
Western blot analysis of TRPM5 expression in SMMC whole cell lysates (lane 1) and 293T whole cell lysates (lane 2). TRPM5 at 131KD was detected using rabbit anti-



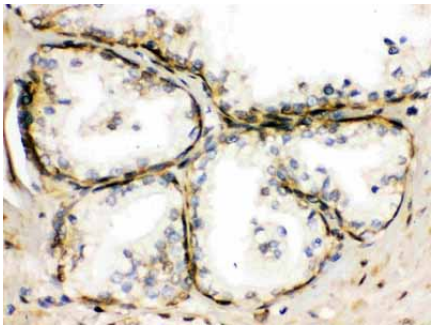
TRPM5 Antigen Affinity purified polyclonal antibody (Catalog # ABO12589) at0.5 □¼g/mL. The blot was developed using chemiluminescence (ECL) method .



TRPM5 was detected in paraffin-embedded sections of mouse brain tissues using rabbit anti- TRPM5 Antigen Affinity purified polyclonal antibody (Catalog # ABO12589) at 1 ??g/mL. The immunohistochemical section was developed using SABC method .



TRPM5 was detected in paraffin-embedded sections of rat testis tissues using rabbit anti- TRPM5 Antigen Affinity purified polyclonal antibody (Catalog # ABO12589) at 1 □¼g/mL. The immunohistochemical section was developed using SABC method .



TRPM5 was detected in paraffin-embedded sections of human prostatic cancer tissues using rabbit anti- TRPM5 Antigen Affinity purified polyclonal antibody (Catalog # ABO12589) at 1 □¼g/mL. The immunohistochemical section was developed using SABC method .