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TRPM6 (CHAK2) Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8053c

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9BX84
Reactivity	Human
Predicted	Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB3407
Calculated MW	231708
Antigen Region	317-348

Additional Information

Gene ID	140803
Other Names	Transient receptor potential cation channel subfamily M member 6, Channel kinase 2, Melastatin-related TRP cation channel 6, TRPM6, CHAK2
Target/Specificity	This TRPM6 (CHAK2) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 317-348 amino acids from the Central region of human TRPM6 (CHAK2).
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TRPM6 (CHAK2) Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TRPM6
Synonyms	CHAK2
Function	Bifunctional protein that combines an ion channel with an intrinsic kinase

	domain, enabling it to modulate cellular functions either by conducting ions through the pore or by phosphorylating downstream proteins via its kinase domain (PubMed:14576148, PubMed:16636202, PubMed:18258429, PubMed:18365021). Crucial for Mg(2+) homeostasis. Has an important role in epithelial Mg(2+) transport and in the active Mg(2+) absorption in the gut and kidney (PubMed:14576148). However, whether TRPM6 forms functional homomeric channels by itself or functions primarily as a subunit of heteromeric TRPM6-TRPM7 channels, is still under debate (PubMed:14576148, PubMed:16636202, PubMed:24385424).
Cellular Location	Cell membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Note=TRPM6 requires the presence of TRPM7 to be targeted to the cell membrane (in HEK 293 cells).
Tissue Location	Highly expressed in kidney and colon. Isoform TRPM6a and isoform TRPM6b, are coexpressed with TRPM7 in kidney, and testis, and are also found in several cell lines of lung origin Isoform TRPM6c is detected only in testis and in NCI-H510A small cell lung carcinoma cells

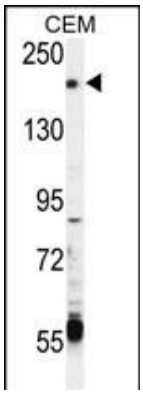
Background

CHAK2 is a member of the ion channel proteins. It regulates the calcium concentration in cells, which is imperative for such functions as muscle contractions and neuronal firing. It is also upregulated in certain forms of cancer and could play a role in diabetes.

References

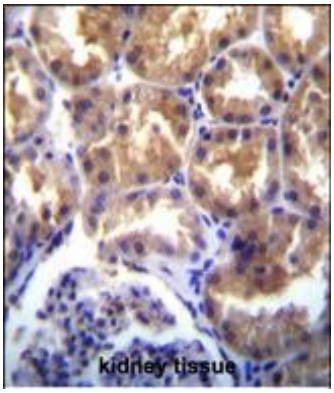
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Images



CHAK2 Antibody (H332) (Cat. #AP8053c) western blot analysis in CEM cell line lysates (35ug/lane).This demonstrates the CHAK2 antibody detected the CHAK2 protein (arrow).

TRPM6(CHAK2) Antibody (Center) (Cat. #AP8053c)immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue



followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of TRPM6 Antibody (CHAK2) (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- Down-regulation of TRPM6-mediated magnesium influx by cyclosporin A.
- Up-Regulation of Transient Receptor Potential Melastatin 6 Channel Expression by Tumor Necrosis Factor-α in the Presence of Epidermal Growth Factor Receptor Tyrosine Kinase Inhibitor.
- TRPM6 expression and cell proliferation are up-regulated by phosphorylation of ERK1/2 in renal epithelial cells.
- Importance of the renal ion channel TRPM6 in the circadian secretion of renin to raise blood pressure

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.