bs-9051R **[Primary Antibody]**

TRPM4 Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 54795 **SWISS:** Q8TD43

Target: TRPM4

Immunogen: KLH conjugated synthetic peptide derived from human TRPM4: 751-850/1214. < Extracellular >

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: Calcium-activated non selective (CAN) cation channel that mediates membrane depolarization. While it is activated by increase in intracellular Ca(2+), it is impermeable to it. Mediates transport of monovalent cations (Na(+) > K(+) > Cs(+) > Li(+)), leading to depolarize the membrane. It thereby plays a central role in cadiomyocytes, neurons from entorhinal cortex, dorsal root and vomeronasal neurons, endocrine pancreas cells, kidney epithelial cells, cochlea hair cells etc. Participates in T-cell activation by modulating Ca(2+) oscillations after T lymphocyte activation, which is required for NFAT-dependent IL2 production. Involved in myogenic constriction of cerebral arteries. Controls insulin secretion in pancreatic beta-cells. May also be involved in pacemaking or could cause irregular electrical activity under conditions of Ca(2+) overload. Affects T-helper 1 (Th1) and T-helper 2 (Th2) cell motility and cytokine production through differential regulation of calcium signaling and NFATC1 localization. Enhances cell proliferation through up-regulation of the beta-catenin signaling pathway.
Involvement in disease:
Defects in TRPM4 are the cause of progressive familial heart block type 1B (PFHB1B) [MIM:604559]. It is a cardiac bundle branch disorder characterized by progressive alteration of cardiac conduction through the His-Purkinje system, with a pattern of a right bundle-branch block and/or left anterior hemiblock occurring individually or together. It leads to complete atrio-ventricular block causing syncope and sudden death.

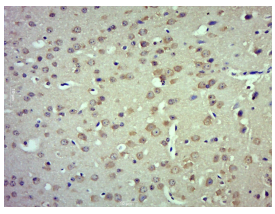
Applications: **IHC-P** (1:100-500)
IHC-F (1:100-500)
IF (1:50-200)
Flow-Cyt (0.2ug/test)

Reactivity: Mouse (predicted: Human, Rat)

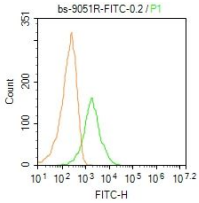
Predicted MW.: 134 kDa

Subcellular Location: Cell membrane ,Cytoplasm

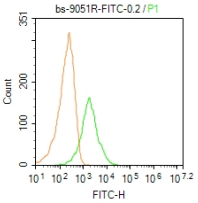
VALIDATION IMAGES



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (TRPM4) Polyclonal Antibody, Unconjugated (bs-9051R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Blank control: Mouse spleen. Primary Antibody (green line): Rabbit Anti-TRPM4/FITC Conjugated antibody (bs-9051R-FITC) Dilution: 0.2µg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG-FITC . Protocol The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 0.1% PBST for 20 min at-20°C. The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature. The cells were stained with Primary Antibody for



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SELECTED CITATIONS

- **[IF=4.8]** Xiaoyu Zhu. et al. Chaihu Guizhi Decoction Prevents Cognitive, Memory Impairments and Sensorimotor Gating Deficit Induced by N-methyl-d-aspartate Receptor Antibody in Mice. J ETHNOPHARMACOL. 2024 Sep;:118806 WB ;Mouse. 39278296