



TRPM4 (m): 293T Lysate: sc-127714

BACKGROUND

Transient receptor potential ion channels (TRPCs) are a superfamily of six transmembrane segment-spanning, gated cation channels. TRPC subtypes mediate store-operated Ca^{2+} entry, a process involving Ca^{2+} influx and replenishment of Ca^{2+} stores formerly emptied through the action of inositol 1,4,5-trisphosphate production and other Ca^{2+} mobilizing agents. TRP ion channels influence calcium-depletion induced calcium influx processes in response to chemo-, mechano- and osmoregulatory events. TRPM4 is a transient receptor potential channel with an intrinsic voltage-sensing mechanism. Voltage dependence of TRPM4 may be functionally important, especially in excitable tissues generating plateau-like or bursting action potentials. TRPM4-mediated depolarization modulates Ca^{2+} oscillations, with downstream effects on cytokine production in T lymphocytes.

REFERENCES

1. Hoth, M., Fanger, C.M. and Lewis, R.S. 1997. Mitochondrial regulation of store-operated calcium signaling in T lymphocytes. *J. Cell Biol.* 137: 633-648.
2. Plant, T.D. and Schaefer, M. 2003. TRPC4 and TRPC5: receptor-operated Ca^{2+} -permeable nonselective cation channels. *Cell Calcium* 33: 441-450.
3. Nilius, B., Prenen, J., Droogmans, G., Voets, T., Vennekens, R., Freichel, M., Wissenbach, U. and Flockerzi, V. 2003. Voltage dependence of the Ca^{2+} -activated cation channel TRPM4. *J. Biol. Chem.* 278: 30813-30820.
4. Launay, P., Cheng, H., Srivatsan, S., Penner, R., Fleig, A. and Kinet, J.P. 2004. TRPM4 regulates calcium oscillations after T cell activation. *Science* 306: 1374-1377.

CHROMOSOMAL LOCATION

Genetic locus: *Trpm4* (mouse) mapping to 7 B4.

PRODUCT

TRPM4 (m): 293T Lysate represents a lysate of mouse TRPM4 transfected 293T cells and is provided as 100 μg protein in 200 μl SDS-PAGE buffer.

APPLICATIONS

TRPM4 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive TRPM4 antibodies. Recommended use: 10-20 μl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20°C . Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.