

KCNMB4 (h): 293T Lysate: sc-115563

BACKGROUND

MaxiK channels are large conductance voltage and Ca^{2+} -activated potassium-channels which are formed by tetramers of MaxiK α subunits, which create pores that are used for smooth muscle tone and neuronal excitability. These MaxiK α subunits have the ability to assemble with MaxiK β subunits that are structurally related and are able to regulate the function of MaxiK α subunits. KCNMB4 (potassium large conductance calcium-activated channel, subfamily M, β member 4), also known as Slo- β -4 or Maxi K channel subunit β -4, is a 210 amino acid multi-pass membrane protein belonging to the KCNMB family. Predominantly expressed in brain, KCNMB4 is a regulatory subunit of the calcium activated potassium MaxiK α channel. KCNMB4 contributes to MaxiK α channel diversity by modulating calcium sensitivity and gating kinetics of MaxiK α .

REFERENCES

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2. Behrens, R., et al. 2000. hKCNMB3 and hKCNMB4, cloning and characterization of two members of the large-conductance calcium-activated potassium channel β subunit family. *FEBS Lett.* 474: 99-106.
3. Brenner, R., et al. 2000. Cloning and functional characterization of novel large conductance calcium-activated potassium channel β subunits, hKCNMB3 and hKCNMB4. *J. Biol. Chem.* 275: 6453-6461.
4. Meera, P., et al. 2000. A neuronal β subunit (KCNMB4) makes the large conductance, voltage- and Ca^{2+} -activated K^+ channel resistant to charybdotoxin and iberiotoxin. *Proc. Natl. Acad. Sci. USA* 97: 5562-5567.
5. Jin, P., et al. 2002. Phosphorylation-dependent functional coupling of hSlo calcium-dependent potassium channel and its h β 4 subunit. *J. Biol. Chem.* 277: 10014-10020.
6. Jin, P., et al. 2002. Reciprocal modulation between the α and β 4 subunits of hSlo calcium-dependent potassium channels. *J. Biol. Chem.* 277: 43724-43729.
7. Orio, P., et al. 2002. New disguises for an old channel: MaxiK channel β -subunits. *News Physiol. Sci.* 17: 156-161.

CHROMOSOMAL LOCATION

Genetic locus: KCNMB4 (human) mapping to 12q15.

PRODUCT

KCNMB4 (h): 293T Lysate represents a lysate of human KCNMB4 transfected 293T cells and is provided as 100 μg protein in 200 μl SDS-PAGE buffer.

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.

APPLICATIONS

KCNMB4 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive KCNMB4 antibodies. Recommended use: 10-20 μl per lane.

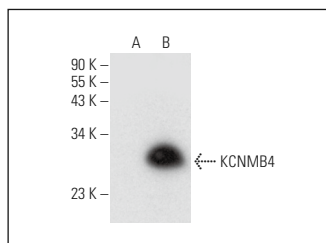
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

KCNMB4 (B-6): sc-515712 is recommended as a positive control antibody for Western Blot analysis of enhanced human KCNMB4 expression in KCNMB4 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

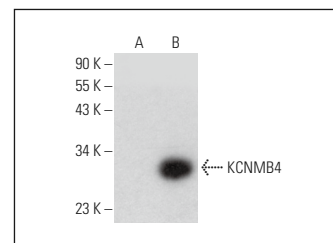
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



KCNMB4 (B-6): sc-515712. Western blot analysis of KCNMB4 expression in non-transfected: sc-117752 (A) and human KCNMB4 transfected: sc-115563 (B) 293T whole cell lysates.



KCNMB4 (E-5): sc-515713. Western blot analysis of KCNMB4 expression in non-transfected: sc-117752 (A) and human KCNMB4 transfected: sc-115563 (B) whole cell lysates.

PROTOCOLS

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