

# IK1 (H-120): sc-32949

## BACKGROUND

The intermediate conductance calcium-activated potassium channel protein 4 (SK4 or IK1) is a member of the KCNN family of potassium channels. IK1 is an integral membrane protein that functions in a variety of physiological functions. Activation of the IK1 channel is induced by intracellular calcium levels and regulated by calmodulin.

## REFERENCES

1. Warth, R., et al. 1999. Molecular and functional characterization of the small  $Ca^{2+}$ -regulated  $K^+$  channel (rSK4) of colonic crypts. *Pflugers Arch.* 438: 437-444.
2. Joiner, W.J., et al. 2001. Calmodulin regulates assembly and trafficking of SK4/IK1  $Ca^{2+}$ -activated  $K^+$  channels. *J. Biol. Chem.* 276: 37980-37985.
3. von Hahn, T., et al. 2001. Characterisation of the rat SK4/IK1  $K^+$  channel. *Cell. Physiol. Biochem.* 11: 219-230.
4. Takahata, T., et al. 2003. SK4/IK1-like channels mediate TEA-insensitive,  $Ca^{2+}$ -activated  $K^+$  currents in bovine parotid acinar cells. *Am. J. Physiol., Cell Physiol.* 284: 127-144.

## CHROMOSOMAL LOCATION

Genetic locus: KCNN4 (human) mapping to 19q13.31; Kcnn4 (mouse) mapping to 7 A3.

## SOURCE

IK1 (H-120) is a rabbit polyclonal antibody raised against amino acids 308-427 mapping at the C-terminus of IK1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

IK1 (H-120) is recommended for detection of IK1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IK1 siRNA (h): sc-72200, IK1 siRNA (m): sc-72201, IK1 shRNA Plasmid (h): sc-72200-SH, IK1 shRNA Plasmid (m): sc-72201-SH, IK1 shRNA (h) Lentiviral Particles: sc-72200-V and IK1 shRNA (m) Lentiviral Particles: sc-72201-V.

Molecular Weight of IK1: 45 kDa.

Positive Controls: Jurkat + PMA cell lysate: sc-24718, NRK whole cell lysate: sc-364197 or HCT 116 whole cell lysate: sc-364175.

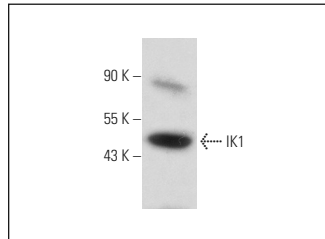
## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

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

## DATA



IK1 (H-120): sc-32949. Western blot analysis of IK1 expression in PMA treated Jurkat whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Jiang, Z.G., et al. 2007. Dihydropyridines inhibit acetylcholine-induced hyperpolarization in cochlear artery via blockade of intermediate-conductance calcium-activated potassium channels. *J. Pharmacol. Exp. Ther.* 320: 544-551.
2. Düfer, M., et al. 2009. Enhanced glucose tolerance by SK4 channel inhibition in pancreatic  $\beta$ -cells. *Diabetes* 58: 1835-1843.
3. Faouzi, M., et al. 2010. Intermediate  $Ca^{2+}$ -sensitive  $K^+$  channels are necessary for prolactin-induced proliferation in breast cancer cells. *J. Membr. Biol.* 234: 47-56.
4. Haren, N., et al. 2010. Intermediate conductance  $Ca^{2+}$  activated  $K^+$  channels are expressed and functional in breast adenocarcinomas: correlation with tumour grade and metastasis status. *Histol. Histopathol.* 25: 1247-1255.
5. Cheng, Z., et al. 2011. Hyperhomocysteinemia impairs endothelium-derived hyperpolarizing factor-mediated vasorelaxation in transgenic cystathionine  $\beta$  synthase-deficient mice. *Blood* 118: 1998-2006.
6. Hirschler-Laszkiewicz, I., et al. 2012. Trpc2 depletion protects red blood cells from oxidative stress-induced hemolysis. *Exp. Hematol.* 40: 71-83.
7. Lambertsen, K.L., et al. 2012. Genetic KCa3.1-deficiency produces locomotor hyperactivity and alterations in cerebral monoamine levels. *PLoS ONE* 7: e47744.
8. Justo, M.L., et al. 2014. Microvascular disorders in obese Zucker rats are restored by a rice bran diet. *Nutr. Metab. Cardiovasc. Dis.* 24:524-531.


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Try **IK1 (D-5): sc-365265**, our highly recommended monoclonal alternative to IK1 (H-120).