

KIR6.1 (C-16): sc-11225

BACKGROUND

ATP-sensitive K⁺ channels play important roles in many cellular functions by coupling cell metabolism to electrical activity. KIR6.1 and KIR6.2 are members of the KIR (for inwardly rectifying potassium channel) family of potassium channels. Inward rectifying K⁺ channels possess a greater tendency to allow potassium to flow into the cell rather than out of it. These channels comprise two subunits: a KIR6.0 subfamily component and a SUR component, which is a member of the ATP-binding cassette protein superfamily. Mutations in the gene coding for these channels are a cause of an autosomal recessive disorder characterized by unregulated insulin secretion. The amino-terminal and carboxyl-terminal domains of KIR channel subunits are both intracellular, and the two intracellular domains of KIR6.2 physically interact with each other.

REFERENCES

1. Inagaki, N., et al. 1995. Reconstitution of IKATP: an inward rectifier subunit plus the sulfonylurea receptor. *Science* 270: 1166-1170.
2. Isomoto, S., et al. 1997. Inwardly rectifying potassium channels: their molecular heterogeneity and function. *Jpn. J. Physiol.* 47: 11-39.
3. Inagaki, N., et al. 1998. ATP-sensitive potassium channels: structures, functions, and pathophysiology. *Jpn. J. Physiol.* 48: 397-412.

CHROMOSOMAL LOCATION

Genetic locus: KCNJ8 (human) mapping to 12p12.1; Kcnj8 (mouse) mapping to 6 G2.

SOURCE

KIR6.1 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of KIR6.1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11225 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KIR6.1 (C-16) is recommended for detection of KIR6.1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

KIR6.1 (C-16) is also recommended for detection of KIR6.1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for KIR6.1 siRNA (h): sc-35752, KIR6.1 siRNA (m): sc-35753, KIR6.1 shRNA Plasmid (h): sc-35752-SH, KIR6.1 shRNA Plasmid (m): sc-35753-SH, KIR6.1 shRNA (h) Lentiviral Particles: sc-35752-V and KIR6.1 shRNA (m) Lentiviral Particles: sc-35753-V.

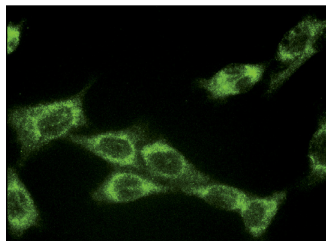
Molecular Weight of KIR6.1: 51 kDa.

Positive Controls: Mouse heart extract: sc-2254 or Sol8 cell lysate: sc-2249.

STORAGE

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

DATA



KIR6.1 (C-16): sc-11225. Immunofluorescence staining of methanol-fixed Sol8 cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Wang, S.Y., et al. 2003. Studies with GIP/Ins cells indicate secretion by gut K cells is KATP channel independent. *Am. J. Physiol. Endocrinol. Metab.* 284: E988-E1000.
2. Jin, X., et al. 2004. Altered gene expression and increased bursting activity of colonic smooth muscle ATP-sensitive K⁺ channels in experimental colitis. *Am. J. Physiol. Gastrointest. Liver Physiol.* 287: G274-G285.
3. Jin, X., et al. 2004. Altered gene expression and increased bursting activity of colonic smooth muscle ATP-sensitive K⁺ channels in experimental colitis. *Am. J. Physiol. Gastrointest. Liver Physiol.* 287: G274-G285.
4. Morrissey, A., et al. 2005. Immunolocalization of KATP channel subunits in mouse and rat cardiac myocytes and the coronary vasculature. *BMC Physiol.* 5: 1.
5. Jiang, M.T., et al. 2006. Characterization of human cardiac mitochondrial ATP-sensitive potassium channel and its regulation by phorbol ester *in vitro*. *Am. J. Physiol. Heart Circ. Physiol.* 290: H1770-H1776.
6. Wu, S.N., et al. 2007. Identification of two types of ATP-sensitive K⁺ channels in rat ventricular myocytes. *Life Sci.* 80: 378-387.
7. Yang, D., et al. 2008. Expression of inwardly rectifying potassium channel subunits in native human retinal pigment epithelium. *Exp. Eye Res.* 87: 176-183.
8. Shorter, K., et al. 2008. Human hair follicles contain two forms of ATP-sensitive potassium channels, only one of which is sensitive to minoxidil. *FASEB J.* 22: 1725-1736.

RESEARCH USE

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