

# KIR6.1 (H-80): sc-20808

## BACKGROUND

ATP-sensitive K<sup>+</sup> 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 (inwardly rectifying potassium channel) family of potassium channels. Inward rectifying K<sup>+</sup> 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.
4. Meissner, T., et al. 1999. Congenital hyperinsulinism: molecular basis of a heterogeneous disease. *Hum. Mutat.* 13: 351-361.
5. Tucker, S.J., et al. 1999. Mapping of the physical interaction between the intracellular domains of an inwardly rectifying potassium channel, KIR6.2. *J. Biol. Chem.* 274: 33393-33397.
6. Seino, S. 1999. ATP-sensitive potassium channels: a model of hetero-multimeric potassium channel/receptor assemblies. *Annu. Rev. Physiol.* 61: 337-362.
7. Miki, T., et al. 1999. The structure and function of the ATP-sensitive K<sup>+</sup> channel in Insulin-secreting pancreatic  $\beta$  cells. *J. Mol. Endocrinol.* 22: 113-123.

## CHROMOSOMAL LOCATION

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

## SOURCE

KIR6.1 (H-80) is a rabbit polyclonal antibody raised against amino acids 345-424 mapping at the C-terminus of KIR6.1 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.

## STORAGE

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

## APPLICATIONS

KIR6.1 (H-80) 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), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

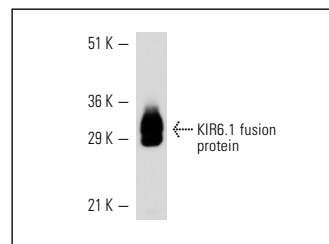
KIR6.1 (H-80) is also recommended for detection of KIR6.1 in additional species, including equine, canine, bovine, porcine and avian.

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.

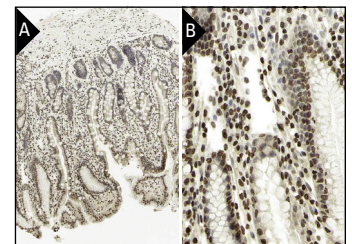
Molecular Weight of KIR6.1: 51 kDa.

Positive Controls: Mouse heart extract: sc-2254 or human stomach extract: sc-363780.

## DATA



KIR6.1 (H-80): sc-20808. Western blot analysis of human recombinant KIR6.1 fusion protein.



KIR6.1 (H-80): sc-20808. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing nuclear staining of glandular cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

## SELECT PRODUCT CITATIONS

1. Brustovetsky, T., et al. 2005. Lack of manifestations of diazoxide/5-hydroxydecanoate-sensitive KATP channel in rat brain nonsynaptosomal mitochondria. *J. Physiol.* 1: 47-59.
2. Schmid, D., et al. 2007. ATP-sensitive potassium channels expressed by human monocytes play a role in stasis-induced thrombogenesis via tissue factor pathway. *Life Sci.* 80: 989-998.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.