



## KIR6.2 (336-390): sc-4518 WB

### 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 (for 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., Gonoi, T., Clement, J.P. IV, Namba, N., Inazawa, J., Gonzalez, G., Aguilar-Bryan, L., Seino, S. and Bryan, J. 1995. Reconstitution of IKATP: an inward rectifier subunit plus the sulfonylurea receptor. *Science* 270: 1166-1170.
2. Isomoto, S., Kondo, C. and Kurachi, Y. 1997. Inwardly rectifying potassium channels: their molecular heterogeneity and function. *Jpn J. Physiol.* 47: 11-39.
3. Inagaki, N. and Seino, S. 1998. ATP-sensitive potassium channels: structures, functions, and pathophysiology. *Jpn J. Physiol.* 48: 397-412.
4. Seino, S. 1999. ATP-sensitive potassium channels: a model of heteromultimeric potassium channel/receptor assemblies. *Annu. Rev. Physiol.* 61: 337-362.
5. Miki, T., Nagashima, K. and Seino, S. 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.
6. Meissner, T., Beinbrech, B. and Mayatepek, E. 1999. Congenital hyperinsulinism: molecular basis of a heterogeneous disease. *Hum. Mutat.* 13: 351-361.
7. Tucker, S.J. and Ashcroft, F.M. 1999. Mapping of the physical interaction between the intracellular domains of an inwardly rectifying potassium channel, Kir6.2. *J. Biol. Chem.* 274: 33393-33397.

### SOURCE

KIR6.2 (336-390) is expressed in *E. coli* as a 33 kDa tagged fusion protein corresponding to amino acids 336-390 of KIR6.2 of human origin.

### PRODUCT

KIR6.2 (336-390) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10  $\mu$ g in 0.1 ml SDS-PAGE loading buffer.

### APPLICATIONS

KIR6.2 (336-390) is suitable as a Western blotting control for sc-20809.

### STORAGE

Store at -20° C; stable for one year from the date of shipment.

### RESEARCH USE

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