

KIR2.2 (h): 293T Lysate: sc-115662

BACKGROUND

The KIR (for inwardly rectifying potassium channel) family of potassium channels possesses a greater tendency to allow potassium to flow into the cell rather than out of it. The KIR2 subunit family includes 2.1, 2.2, 2.3 and 2.4. Unlike G protein-coupled KIR3 subunits, KIR2.1 requires both phosphorylation by PKA and ATP hydrolysis for functional activity. KIR2.1 is expressed in the superior and inferior collicula and the pontine region of the brain, where it moderates synaptic transmission, like many other potassium channels. In the placenta, KIR2.1 is expressed throughout gestation in cytotrophoblast cells. In the kidney, KIR2.1 colocalizes with KIR5.1 in the proximal tubule. KIR2.1, 2.2 and 2.3 associate with the membrane-associated guanylate kinase synapse-associated protein 97 in the cerebellum and heart. Phosphorylation of KIR2.2 by protein kinase A inhibits the associates with SAP97. Arachidonic acid increases current amplitude in Kir2.3 activity but does not affect the activity of KIR2.1, 2.2 or 2.4. Kir2.4 is abundantly expressed in the neuronal retina and is sensitive to changes in extracellular pH.

REFERENCES

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4. Hughes, B.A., et al. 2000. Cloning and functional expression of human retinal kir2.4, a pH-sensitive inwardly rectifying K⁺ channel. *Am. J. Physiol. Cell Physiol.* 279: 771-784.
5. Leonoudakis, D., et al. 2001. Inward rectifier potassium channel Kir2.2 is associated with synapse-associated protein SAP97. *J. Cell Sci.* 114: 987-998.
6. Liu, Y., et al. 2001. Direct activation of an inwardly rectifying potassium channel by arachidonic acid. *Mol. Pharmacol.* 59: 1061-1068.
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CHROMOSOMAL LOCATION

Genetic locus: KCNJ12 (human) mapping to 17p11.2.

PRODUCT

KIR2.2 (h): 293T Lysate represents a lysate of human KIR2.2 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.

APPLICATIONS

KIR2.2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive KIR2.2 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.

RESEARCH USE

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

PROTOCOLS

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