

## Product datasheet for **AP20232PU-M**

### **GIRK1 (KCNJ3) Rabbit Polyclonal Antibody**

#### **Product data:**

Product Type:	Primary Antibodies
Applications:	IF, WB
Recommended Dilution:	<b>Western blot:</b> 1/500-1/1000. <b>Immunofluorescence:</b> 1/50-1/200.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Synthetic peptide corresponding to amino acids 150-200 of Human KIR3.1.
Specificity:	This antibody detects endogenous levels of KIR3.1 protein surrounding Phe 181.
Formulation:	Phosphate buffered saline (PBS) with 0.05% sodium azide, approx. pH 7.2 State: Aff - Purified State: Liquid purified Ig fraction (> 95% pure by SDS-PAGE)
Concentration:	1.0 mg/ml
Purification:	Affinity Chromatography using epitope-specific immunogen.
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~43 kDa
Gene Name:	potassium voltage-gated channel subfamily J member 3
Database Link:	<u><a href="#">Entrez Gene 16519 Mouse</a></u> <u><a href="#">Entrez Gene 50599 Rat</a></u> <u><a href="#">Entrez Gene 3760 Human P48549</a></u>



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**Background:**

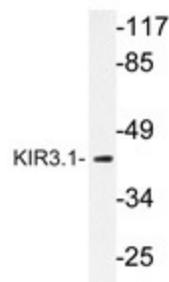
G protein-coupled inwardly rectifying potassium channels (KIR3.1 through KIR3.4) are coupled to numerous neurotransmitter receptors in the brain and are abundantly expressed in the olfactory bulb, hippocampus, neocortex, dentate gyrus, cerebellar cortex and thalamus regions of the brain. Also known as GIRK, KIR3 potassium channels localize to the soma and dendrites as well as axons of neurons. Liberated G $\beta$  subunits from G protein heterotrimers bind to and regulate KIR3 channel activity. G $\beta$ 3- and G $\beta$ 4-containing G $\beta$  dimers bind directly to cytoplasmic domains of KIR3 proteins and increase the K $^{+}$  current while G $\beta$ 5-containing G $\beta$  dimers inhibit KIR3 K $^{+}$  current. KIR3 activity is also inhibited by tyrosine phosphorylation. Brain-derived neurotrophic factor activates receptor tyrosine kinase B, which then phosphorylates KIR3 tyrosine residues, effectively inactivating the KIR3 channels.

**Synonyms:**

GIRK1

**Protein Families:**

Druggable Genome, Ion Channels: Potassium, Transmembrane

**Product images:**

Western blot analysis of KIR3.1 antibody in extracts from NIH/3T3 cells.