

## Product datasheet for **KN205322**

### **GIRK1 (KCNJ3) Human Gene Knockout Kit (CRISPR)**

#### Product data:

**Product Type:** Knockout Kits (CRISPR)  
**Format:** 2 gRNA vectors, 1 GFP-puro donor, 1 scramble control  
**Donor DNA:** GFP-puro  
**Symbol:** GIRK1  
**Locus ID:** 3760  
**Components:** **KN205322G1**, GIRK1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GTAGTGACCACATCGTCCAG  
**KN205322G2**, GIRK1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GAAATTTGGGGACGATTATC  
**KN205322D**, donor DNA containing left and right homologous arms and GFP-puro functional cassette.

Homologous arm and GFP-puro sequences:

pUC vector backbone in gray; **Left arm sequence in blue**; **GFP-puro in green**; **Right arm in violet**

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**GE100003**, scramble sequence in pCas-Guide vector

**Disclaimer:**

These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

**RefSeq:**

[NM\\_001260508](#), [NM\\_001260509](#), [NM\\_001260510](#), [NM\\_002239](#)

**UniProt ID:**

[P48549](#)

**Synonyms:**

GIRK1; KGA; KIR3.1

**Summary:**

Potassium channels are present in most mammalian cells, where they participate in a wide range of physiologic responses. The protein encoded by this gene is an integral membrane protein and inward-rectifier type potassium channel. The encoded protein, which has a greater tendency to allow potassium to flow into a cell rather than out of a cell, is controlled by G-proteins and plays an important role in regulating heartbeat. It associates with three other G-protein-activated potassium channels to form a heteromultimeric pore-forming complex that also couples to neurotransmitter receptors in the brain and whereby channel activation can inhibit action potential firing by hyperpolarizing the plasma membrane. These multimeric G-protein-gated inwardly-rectifying potassium (GIRK) channels may play a role in the pathophysiology of epilepsy, addiction, Down's syndrome, ataxia, and Parkinson's disease. Alternative splicing results in multiple transcript variants encoding distinct proteins. [provided by RefSeq, May 2012]

**Product images:**
