

Product name:	GIRK-1 Rabbit Monoclonal Antibody
Cat number:	MABN03997
Conjugate:	Unconjugated
Size:	100µL
Clone:	Monoclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	A synthetic peptide of human GIRK1
Reactivity:	Human, Mouse, Rat
Applications:	WB 1:500-1:1000,FC 1:50-1:100
Molecular Weight:	Calculated MW:57 kDa;Observed MW: 57 kDa
Purification:	Affinity Purification
Form:	Liquid
Buffer:	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.
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 Gβ subunits from G protein heterotrimers bind to and regulate KIR3 channel activity. Gβ3- and Gβ4-containing Gβ dimers bind directly to cytoplasmic domains of KIR3 proteins and increase the K^{+} current while Gβ5-containing Gβ 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.