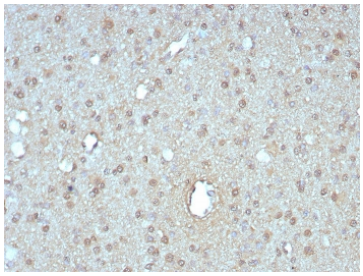
GIRK2 Antibody / G protein activated inward rectifier potassium channel 2 [clone KCNJ6/7558] (V4839)

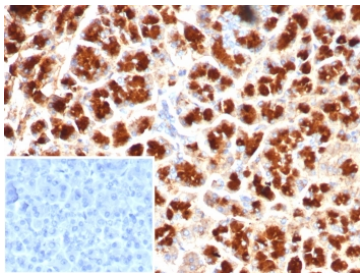
Catalog No.	Formulation	Size
V4839-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4839-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4839SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2, kappa
Clone Name	KCNJ6/7558
Purity	Protein A/G affinity
UniProt	P48051
Localization	Membrane
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This GIRK2 antibody is available for research use only.



GIRK2 Antibody KCNJ6/7558 in Human Pancreas IHC. Immunohistochemistry staining of FFPE human pancreas tissue with GIRK2 Antibody clone KCNJ6/7558 at 2 ug/ml. HIER was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min followed by cooling before testing. The image shows moderate granular brown staining distributed through pancreatic cells, with nuclei remaining comparatively unstained. This cytoplasmic and membranous-associated staining demonstrates tissue detection with the KCNJ6 Monoclonal Antibody.



GIRK2 Antibody KCNJ6/7558 Strong Pancreatic Staining IHC. Immunohistochemistry staining of FFPE human pancreas tissue with GIRK2 Antibody clone KCNJ6/7558 at 2 ug/ml. HIER was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min followed by cooling before testing. Strong brown immunoreactivity is visible throughout the pancreatic cells, while the inset PBS/secondary-only negative control shows minimal background staining. The marked contrast with the negative control provides additional support for specific tissue detection with the KCNJ6 Monoclonal Antibody.

Description

GIRK2 Antibody KCNJ6/7558 / KCNJ6 Monoclonal Antibody recognizes GIRK2, a G protein-gated inwardly rectifying potassium channel encoded by the KCNJ6 gene. Also known as Kir3.2, this channel belongs to the inward rectifier potassium channel family and contributes to regulation of membrane potential and cellular excitability. GIRK channels preferentially conduct potassium ions at membrane potentials below the potassium equilibrium potential, allowing them to exert an inhibitory influence on electrically excitable cells.

GIRK2 participates in signaling downstream of G protein-coupled receptors. Receptor activation releases G protein beta-gamma subunits that can interact with GIRK channels and promote channel opening. The resulting potassium conductance hyperpolarizes the membrane and decreases the likelihood of action potential generation. This provides an important mechanism through which extracellular signals can rapidly modulate neuronal activity and other cellular responses.

KCNJ6 can form homomeric channels as well as heteromeric complexes with other GIRK family members. The composition of these complexes influences their electrophysiological properties, regulation and distribution. GIRK2-containing channels are especially important in the nervous system, where they contribute to inhibitory neurotransmission and modulation of neuronal firing downstream of several classes of neurotransmitter receptors.

GIRK2 has consequently been studied in neural circuits involved in pain, reward, addiction and other processes controlled by inhibitory signaling. Genetic disruption of KCNJ6 can also have substantial developmental effects. Pathogenic KCNJ6 variants are associated with Keppen-Lubinsky syndrome, while changes affecting GIRK2 expression or activity have been investigated in additional neurological and neurodevelopmental contexts.

NSJ Bioreagents offers clone KCNJ6/7558 as a monoclonal reagent for research into GIRK2 expression, potassium channel biology and G protein-mediated signaling. The GIRK2 Antibody terminology reflects the widely used functional name of the channel, while KCNJ6 Monoclonal Antibody provides the corresponding gene-based designation.

A GIRK2 Antibody provides a monoclonal reagent for investigating G protein-regulated potassium channel biology and cellular excitability, while a KCNJ6 Monoclonal Antibody supports research using the gene-based nomenclature for this inward rectifier channel.

For another monoclonal antibody targeting the same potassium channel, see our KCNJ6 Antibody KCNJ6/7557 / GIRK2 Monoclonal Antibody.

Application Notes

Optimal dilution of the GIRK2 antibody should be determined by the researcher.

Immunogen

A recombinant fragment of human KCNJ6 protein was used as the immunogen for the GIRK2 antibody.

Storage

Aliquot the GIRK2 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

KCNJ6 antibody, Kir3.2 antibody, G Protein-Activated Inward Rectifier Potassium Channel 2 antibody

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