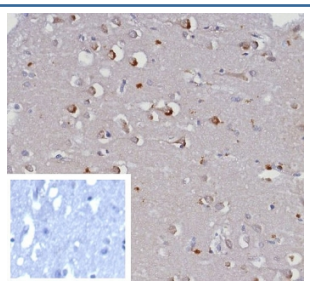
KCNJ6 Antibody KCNJ6/7557 / GIRK2 Monoclonal Antibody [clone KCNJ6/7557] (V4812)

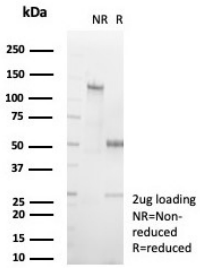
Catalog No.	Formulation	Size
V4812-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4812-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4812SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

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	KCNJ6/7557
Purity	Protein A/G affinity
UniProt	P48051
Localization	Membrane
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This KCNJ6 Antibody KCNJ6/7557 / GIRK2 Monoclonal Antibody is available for research use only.



KCNJ6 Antibody KCNJ6/7557 in Human Brain IHC. Immunohistochemistry staining of FFPE human brain tissue with KCNJ6 Antibody clone KCNJ6/7557 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. Distinct brown staining is visible in neuronal cell bodies and associated processes against a lightly stained background. The inset PBS/secondary-only negative control shows minimal staining, supporting the specificity of the observed signal. This controlled tissue staining demonstrates detection with the GIRK2 Monoclonal Antibody.



Purified KCNJ6 Antibody KCNJ6/7557 SDS-PAGE. SDS-PAGE analysis of 2 ug purified, BSA-free KCNJ6 Antibody clone KCNJ6/7557 under non-reducing (NR) and reducing (R) conditions. The non-reduced preparation shows a predominant intact immunoglobulin band above 100 kDa, while reduction resolves the expected antibody heavy chain near 50 kDa and light chain near 25 kDa. The relatively simple electrophoretic profile supports the integrity and purity of the antibody preparation and provides a biochemical quality assessment of the GIRK2 Monoclonal Antibody.

Description

KCNJ6 Antibody KCNJ6/7557 / GIRK2 Monoclonal Antibody recognizes KCNJ6, an inwardly rectifying potassium channel commonly known as GIRK2. KCNJ6 belongs to the G protein-gated inwardly rectifying potassium channel family and is also designated Kir3.2. These channels preferentially conduct potassium ions into cells at membrane potentials below the potassium equilibrium potential and play important roles in controlling membrane excitability.

GIRK channels are regulated downstream of G protein-coupled receptors. Following receptor activation, G protein beta-gamma subunits can interact directly with GIRK channels and increase potassium conductance. The resulting membrane hyperpolarization reduces cellular excitability, providing an important mechanism through which neurotransmitters and other extracellular signals regulate neuronal activity. KCNJ6 can participate in both homomeric and heteromeric channel complexes, with its subunit composition influencing channel properties and physiological function.

KCNJ6 is particularly important in the nervous system, where GIRK-mediated currents contribute to inhibitory signaling and modulation of neuronal firing. GIRK2-containing channels participate in responses downstream of multiple neurotransmitter receptors and help regulate neuronal excitability, synaptic transmission and neural circuit activity. Because of this role, GIRK2 has been studied extensively in the context of neurological signaling, behavior and the actions of G protein-coupled receptors.

Alterations in KCNJ6 function can have significant physiological consequences. Pathogenic variants in KCNJ6 are associated with Keppen-Lubinsky syndrome, a rare developmental disorder characterized by severe developmental delay, intellectual disability and distinctive craniofacial features. GIRK2 function has also been investigated in studies of neuronal excitability, pain, reward pathways, addiction and other processes involving inhibitory neurotransmission.

NSJ Bioreagents offers clone KCNJ6/7557 as a monoclonal reagent for research into KCNJ6 expression, GIRK channel biology and neuronal signaling. The KCNJ6 Antibody provides a gene-focused designation for researchers investigating this potassium channel, while the GIRK2 Monoclonal Antibody terminology reflects its widely recognized functional name.

A KCNJ6 Antibody provides a monoclonal reagent for investigating GIRK2 expression and G protein-regulated potassium channel biology, while a GIRK2 Monoclonal Antibody supports research into inhibitory signaling and regulation of cellular excitability.

Explore additional antibodies for ion channels, neuronal signaling and nervous system research on our Neuroscience Antibodies page.

Application Notes

Optimal dilution of the KCNJ6 Antibody KCNJ6/7557 / GIRK2 Monoclonal Antibody should be determined by the researcher.

Immunogen

A recombinant fragment of human protein was used as the immunogen for the KCNJ6 Antibody KCNJ6/7557.

Storage

Aliquot the KCNJ6 Antibody KCNJ6/7557 and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

GIRK2 antibody, Kir3.2 antibody, G Protein-Activated Inward Rectifier Potassium Channel 2 antibody

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