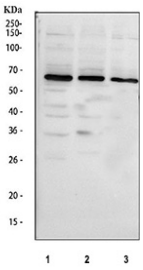
GRK6 Antibody / G protein coupled receptor kinase 6 (R32102)

Catalog No.	Formulation	Size
R32102	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P43250
Applications	Western Blot : 0.1-0.5ug/ml
Limitations	This GRK6 antibody is available for research use only.



Western blot testing of 1) human 293T, 2) human HeLa and 3) human K562 cell lysate with GRK6 antibody. Expected molecular weight ~66 kDa.

Description

GRK6 antibody targets G protein coupled receptor kinase 6, encoded by the GRK6 gene. G protein coupled receptor kinase 6 is a member of the GRK family of serine-threonine kinases that regulate signaling through G protein coupled receptors (GPCRs). GRK6 is primarily localized to the cytoplasm and plasma membrane, where it phosphorylates activated GPCRs following ligand binding. This phosphorylation promotes recruitment of arrestin proteins, leading to receptor desensitization, internalization, and signal termination, thereby ensuring appropriate control of GPCR-mediated signaling.

Functionally, G protein coupled receptor kinase 6 plays a critical role in fine-tuning cellular responses to extracellular stimuli. By regulating the duration and intensity of GPCR signaling, GRK6 influences diverse biological processes including immune cell migration, neurotransmission, cardiovascular regulation, and sensory perception. GRK6 activity affects both classical G protein signaling and arrestin-dependent pathways, positioning it as an important modulator of signal bias and downstream cellular outcomes. A GRK6 antibody supports studies focused on GPCR regulation and intracellular signaling dynamics.

GRK6 is broadly expressed across many tissues, with notable expression in immune cells, brain, heart, lung, and vascular tissues. In the immune system, GRK6 has been implicated in the regulation of chemokine receptor signaling, influencing leukocyte trafficking and inflammatory responses. In the nervous system, GRK6 contributes to the regulation of neurotransmitter receptor signaling, supporting synaptic plasticity and neural communication. This widespread expression pattern highlights the importance of GRK6 in maintaining signaling balance across multiple physiological systems.

From a disease-relevance perspective, altered GRK6 expression or activity has been associated with several pathological conditions. Dysregulation of GRK6 has been linked to inflammatory and autoimmune disorders, where abnormal chemokine receptor signaling can drive excessive immune cell infiltration. GRK6 has also been studied in neurological disorders and cardiovascular disease, reflecting its role in controlling receptor responsiveness in excitable tissues. In cancer research, changes in GRK6 expression have been associated with tumor progression and metastasis, potentially through effects on chemokine and growth factor receptor signaling pathways.

At the molecular level, G protein coupled receptor kinase 6 has an apparent molecular weight of approximately 65 to 70 kDa. The protein contains a conserved kinase domain characteristic of the GRK family, along with regulatory regions that mediate membrane association and receptor interaction. Post-translational modifications, including phosphorylation and lipid interactions, influence GRK6 localization and activity. A GRK6 antibody supports research applications focused on GPCR signaling, immune regulation, and disease-associated receptor dysfunction, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

Optimal dilution of the GRK6 antibody should be determined by the researcher.

Immunogen

Amino acids QSPFQQRKKKIKREEVERLVKEVPEEYSERFSPQAR of human GRK6 were used as the immunogen for the GRK6 antibody.

Storage

After reconstitution, the GRK6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.