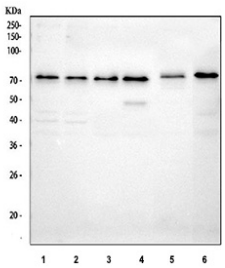
BDKRB2 Antibody / B2 bradykinin receptor (R32515)

Catalog No.	Formulation	Size
R32515	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P30411
Localization	Cytoplasmic, nuclear
Applications	Western Blot : 0.5-1ug/ml
Limitations	This BDKRB2 antibody is available for research use only.



Western blot testing of 1) human HaCaT, 2) human A431, 3) human A549, 4) human MCF7, 5) rat C6 and 6) mouse Neuro-2a cell lysate with BDKRB2 antibody at 0.5ug/ml. Predicted molecular weight ~44 kDa but may be observed at higher molecular weights due to glycosylation.

Description

BDKRB2 antibody is a valuable reagent for studying vascular biology, inflammation, and G protein-coupled receptor (GPCR) signaling. The encoded protein, B2 bradykinin receptor, is a constitutively expressed GPCR that binds bradykinin, a peptide mediator involved in vasodilation, vascular permeability, and pain sensation. Unlike the inducible B1 receptor, BDKRB2 is widely expressed under physiological conditions in endothelial cells, smooth muscle, and various tissues, where it mediates most of the acute effects of bradykinin on the cardiovascular and inflammatory systems.

Activation of the B2 bradykinin receptor triggers intracellular signaling cascades, including phospholipase C activation,

inositol trisphosphate (IP3) generation, and calcium mobilization. These pathways lead to smooth muscle relaxation, nitric oxide release, and prostacyclin production, all of which contribute to vasodilation and maintenance of vascular tone. Through these mechanisms, BDKRB2 is a critical regulator of blood pressure, microcirculation, and endothelial barrier integrity.

Beyond vascular control, BDKRB2 plays key roles in inflammation and pain. Bradykinin signaling through this receptor promotes edema, leukocyte recruitment, and sensitization of nociceptors. Dysregulation of BDKRB2 activity has been implicated in pathological conditions such as hereditary angioedema, asthma, hypertension, and chronic pain syndromes. Because of its involvement in these pathways, the B2 bradykinin receptor has been explored as a therapeutic target in cardiovascular, inflammatory, and pain-related diseases.

At the molecular level, BDKRB2 is a seven-transmembrane receptor that couples to Gq proteins to stimulate phosphoinositide hydrolysis and calcium signaling. It can also engage Gi proteins and activate MAPK pathways, linking it to cell proliferation and survival. Receptor desensitization and internalization are tightly regulated by phosphorylation and interaction with beta-arrestins, mechanisms that modulate receptor responsiveness during sustained stimulation.

The BDKRB2 antibody is widely used in western blotting, immunohistochemistry, immunofluorescence, and flow cytometry to study receptor expression, localization, and regulation. These applications are important for research in vascular physiology, inflammation, and drug development. For scientists investigating GPCR signaling, endothelial biology, or therapeutic intervention strategies, the BDKRB2 antibody provides a reliable detection tool. NSJ Bioreagents offers validated antibodies that ensure reproducibility and accuracy in advanced molecular studies.

Application Notes

Differences in protocols and secondary/substrate sensitivity may require the BDKRB2 antibody to be titrated for optimal performance.

Immunogen

Amino acids 357-391 (RSEPIQMENSMGTLRTSISVERQIHKLQDWAGSRQ) from the human protein were used as the immunogen for the BDKRB2 antibody.

Storage

After reconstitution, the BDKRB2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.