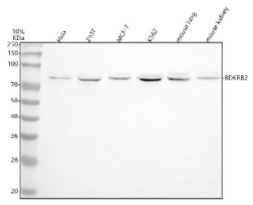
BDKRB2 Antibody / Bradykinin receptor B2 [clone AFAG-2] (FY12987)

Catalog No.	Formulation	Size
FY12987	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

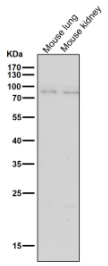
Recombinant RABBIT MONOCLONAL

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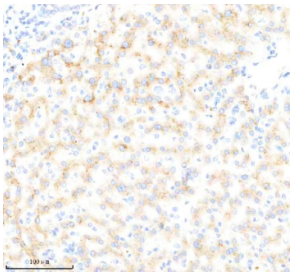
Availability	2-3 weeks
Species Reactivity	Human, Mouse
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	AFAG-2
Purity	Affinity chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P30411
Applications	Western Blot: 0.25-0.5ug/ml Immunohistochemistry: 2-5ug/ml Immunoprecipitation: 2-4ug/500ug of lysate
Limitations	This BDKRB2 antibody is available for research use only.



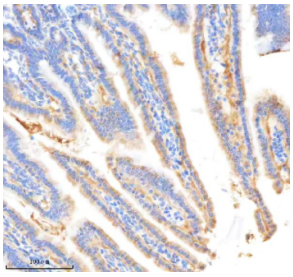
Western blot analysis of BDKRB2 using anti-BDKRB2 antibody. Lane 1: human Hela whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: human MCF-7 whole cell lysates, Lane 4: human K562 whole cell lysates, Lane 5: mouse lung tissue lysates, Lane 6: mouse kidney tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-BDKRB2 antibody at 1:500 overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:500 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. A specific band was detected for BDKRB2 at approximately 78 kDa. The expected molecular weight of BDKRB2 is ~78 kDa.



Western blot testing of mouse samples with the BDKRB2 antibody at 1:3000 dilution for 1 hour at room temperature. Predicted molecular weight ~78 kDa.



Immunohistochemical staining of BDKRB2 using anti-BDKRB2 antibody. BDKRB2 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:200 rabbit anti-BDKRB2 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Immunohistochemical staining of BDKRB2 using anti-BDKRB2 antibody. BDKRB2 was detected in a paraffin-embedded section of mouse small intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:200 rabbit anti-BDKRB2 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.

Description

BDKRB2 antibody detects Bradykinin receptor B2, a G-protein-coupled receptor (GPCR) that mediates the physiological actions of bradykinin, a peptide involved in inflammation, vasodilation, and pain perception. The UniProt recommended name is Bradykinin receptor B2 (BDKRB2). This receptor is constitutively expressed in many tissues and acts as a key regulator of vascular tone, fluid balance, and inflammatory signaling.

Functionally, BDKRB2 antibody identifies a 364-amino-acid transmembrane receptor that activates intracellular signaling cascades upon bradykinin binding. The B2 receptor couples primarily to Gq and Gi proteins, triggering phospholipase C activation, intracellular calcium release, and nitric oxide production. This cascade promotes vasodilation, increases vascular permeability, and contributes to pain sensitization. BDKRB2 also regulates smooth muscle contraction and endothelial function through modulation of cyclic GMP pathways.

The BDKRB2 gene is located on chromosome 14q32.1 and encodes a receptor with seven transmembrane helices typical of GPCRs. Unlike the inducible B1 receptor, BDKRB2 is constitutively expressed under physiological conditions and mediates most acute responses to bradykinin. The receptor undergoes rapid desensitization and internalization upon agonist stimulation, allowing precise control of signal duration and intensity. BDKRB2 signaling is critical for cardiovascular regulation, renal function, and nociception.

In the vascular system, BDKRB2 activation stimulates endothelial nitric oxide synthase (eNOS), leading to vasorelaxation and reduced blood pressure. In the kidney, it modulates sodium excretion and renin release, linking it to salt balance and blood pressure homeostasis. Dysregulation of BDKRB2 expression or signaling contributes to hypertension, hereditary angioedema, and chronic inflammatory conditions. Polymorphisms in BDKRB2 have been associated with altered cardiovascular responses and endurance performance in humans.

Beyond vascular biology, BDKRB2 participates in neuroinflammation, pain transmission, and tumor biology. Its activation sensitizes nociceptive neurons and facilitates cross-talk with cytokine and prostaglandin pathways. In cancer, BDKRB2

expression promotes angiogenesis and cell migration, suggesting a role in tumor progression. Conversely, BDKRB2-mediated nitric oxide release can induce apoptosis under oxidative conditions, reflecting its context-dependent activity.

BDKRB2 antibody is used extensively in research on inflammation, vascular signaling, and neurobiology. It is suitable for immunoblotting, immunofluorescence, and receptor binding assays to detect expression patterns and subcellular localization. This antibody aids in studying GPCR signaling mechanisms and the pharmacological modulation of bradykinin pathways. NSJ Bioreagents provides BDKRB2 antibody reagents validated for use in cardiovascular, inflammatory, and neurophysiological research.

Application Notes

Optimal dilution of the BDKRB2 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human BDKRB2 was used as the immunogen for the BDKRB2 antibody.

Storage

Store the BDKRB2 antibody at -20oC.

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