

Anti-PKR EIF2AK2 Antibody

Catalog Number: A01384-1

About EIF2AK2

The interferon-inducible, double-stranded RNA (dsRNA)-dependent protein kinase PKR is a member of the eukaryotic initiation factor-2 alpha (eIF2-alpha) kinase family, possessing serine-threonine kinase activity and two dsRNA-binding motifs that acts as part of the innate immune system. Upon binding dsRNA, PKR undergoes a conformational change leading to its activation and its phosphorylation of the translation factor eIF2, resulting in a general shutdown of protein synthesis and induction of apoptosis through upregulation of caspase-8 and caspase-9 activity in order to prevent the production of more viruses. To evade the antiviral effects of PKR, viruses have evolved multiple mechanisms, such as the inhibition of PKR by the non-structural protein (NS1) of the influenza virus. More recently, PKR has been implicated in several neurodegenerative diseases including Alzheimer, Huntington, and amyotrophic lateral sclerosis.

Overview

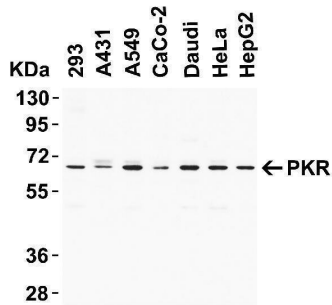
Product Name	Anti-PKR EIF2AK2 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-PKR EIF2AK2 Antibody (Catalog # A01384-1). Tested in ELISA, WB, IHC-P, IF applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, IF, IHC-P, WB
Clonality	Polyclonal
Formulation	PKR Antibody is supplied in PBS containing 0.02% sodium azide.
Storage Instructions	PKR antibody can be stored at 4°C for three months and -20°C, stable for up to one year. Avoid repeated freeze-thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Host	Rabbit
Uniprot ID	P19525

Technical Details

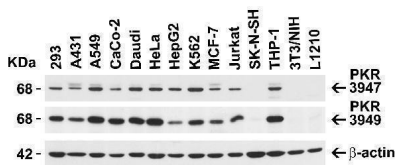
Immunogen	Anti-PKR antibody was raised against a 14 amino acid synthetic peptide near the carboxy terminus of human PKR. The immunogen is located within the last 50 amino acids of PKR.
Predicted Reactive Species	Bovine, Guinea Pig, Pig
Cross Reactivity	At least two different isoforms of PKR are known to exist; this antibody will detect both isoforms.
Isotype	IgG
Form	Liquid
Concentration	1 mg/mL

Purification	PKR Antibody is affinity chromatography purified via peptide column.
Suggested Dilutions	WB: 1 ug/mL; IF: 20 ug/mL; IHC-P: 2.5-5 ug/mL. Antibody validated: Western Blot in human and mouse samples; Immunohistochemistry in mouse and rat samples and Immunofluorescence in mouse samples. All other applications and species not yet tested. Optimal dilutions for each application should be determined by the researcher.

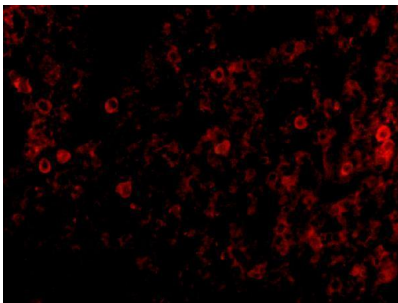
Anti-PKR EIF2AK2 Antibody (A01384-1) Images



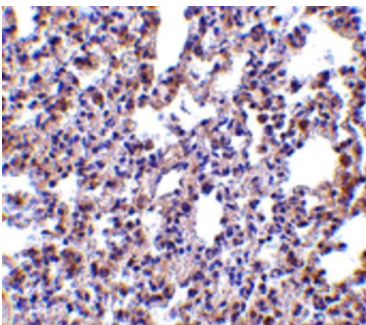
Western Blot Validation of PKR in Human Cell Lines Loading: 15 ug of lysates per lane. Antibodies: PKR A01384-1 (1 ug/mL), 1h incubation at RT in 5% NFD/MTBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



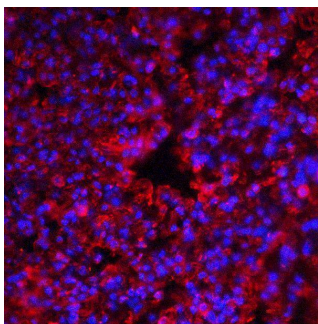
Independent Antibody Validation (IAV) via Protein Expression Profile in Cell Lines Loading: 15 ug of lysates per lane. Antibodies: PKR A01384-1 (1 ug/mL), PKR 3949 (1 ug/mL), and beta-actin (1 ug/mL), 1h incubation at RT in 5% NFD/MTBST. Secondary: Goat anti-rabbit IgG HRP conjugate at 1:10000 dilution.



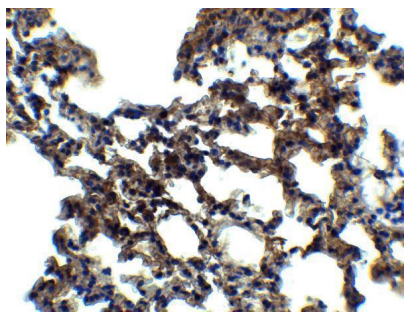
Immunofluorescence Validation of PKR in Mouse Lung
Immunofluorescent analysis of 4% paraformaldehyde-fixed mouse lung tissue labeling PKR with A01384-1 at 20 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (red).



Immunohistochemistry Validation of PKR in Rat Lung
Immunohistochemical analysis of paraffin-embedded rat lung tissue using anti-PKR antibody (A01384-1) at 2.5 ug/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



Immunofluorescence Validation of PKR in Mouse Lung
Immunofluorescent analysis of 4% paraformaldehyde-fixed mouse lung tissue labeling PKR with A01384-1 at 20 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (red) and DAPI staining (blue).



Immunohistochemistry Validation of PKR in Mouse Lung
Immunohistochemical analysis of paraffin-embedded mouse lung tissue using anti-PKR antibody (A01384-1) at 5 ug/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.

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Anti-PKR EIF2AK2 Antibody

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