

PKR ABfinity™ Recombinant Rabbit Monoclonal Antibody - Purified

Catalog no. 700286

(See product label for lot information)



Clone/PAD: 23H52L96
Isotype: IgG
Gene ID: 5610
Protein Acc. no.: P19525
Qty: 100 µg
Volume: 200 µl
Concentration: 0.5 mg/mL

Formulation

PBS + 0.09% sodium azide

Validation

Validated for use in WB and IF

Reactivity

This antibody is specific for human PKR,

Immunogen

recombinant protein

Immunogen sequence

aminoacids 54-158

Sequence Homology

Rhesus monkey

Expected Reactivity

Based on sequence identity and similarity, reactivity to Rhesus monkey is expected.

Storage

2-8°C for up to 1 month, -20°C for long term storage. Avoid repeated freezing and thawing.

Expiration Date

Expires one year from date of receipt when stored as instructed.

Background

Double-stranded RNA-dependent protein kinase (PKR) is a 68 kDa protein that is induced by interferon and double-stranded RNAs (dsRNA) produced in virus-infected cells (1). Two dsRNA-binding domains in the N-terminus interact with dsRNA to modify the conformation of PKR and allow it to undergo autophosphorylation and activation. Once activated, PKR phosphorylates eIF2 α , leading to inhibition of protein synthesis, growth suppression, and apoptosis induction (2-4). The phosphorylation of two sites in the activation loop of the kinase domain, threonines 446 and 451 is critical for high level catalytic activity (5 and 6).

References

1. Vorburgher, S.A., et al. (2002) Role for the double-stranded RNA activated protein kinase PKR in E2F-1-induced apoptosis. *Oncogene* 21(41):6278-6288.
2. Horng, T., et al. (2001) TIRAP: an adapter molecule in the Toll signaling pathway. *Nature Immunol.* 2 (9):835-841.
3. Peel, A.L., et al. (2001) Double-stranded RNA-dependent protein kinase, PKR, binds preferentially to Huntington's disease (HD) transcripts and is activated in HD tissue. *Human Mol. Gen.* 10(15):1531-1538.
4. Patel, C.V., et al. (2000) PACT, a stress-modulated cellular activator of interferon-induced, double-stranded RNA activated protein kinase, PKR. *J. Biol. Chem.* 275(48):37993-37998.
5. Zhang, F., et al. (2001) Binding of double-stranded RNA to protein kinase PKR is required for dimerization and promotes critical autophosphorylation events in the activation loop. *J. Biol. Chem.* 276(27):24946-24958.
6. Cuddihy, A.R., et al. (1999) The double-stranded RNA activated protein kinase PKR physically associates with the tumor suppressor p53 protein and phosphorylates human p53 on serine 392 in vitro. *Oncogene* 18(17):2690-2702.

Applications:

Following applications had been tested during development. To make sure the consistency and reliability in the future lots, each lot is tested with antigen ELISA for specificity and potency. Each lot is also tested with SDS-PAGE, to ensure high purity.

	Species	Test Material	Concentration
Western Blotting	human	MCF7	0.5-5 µg/ml
Immunofluorescence	human	HEK293	5 µg/ml

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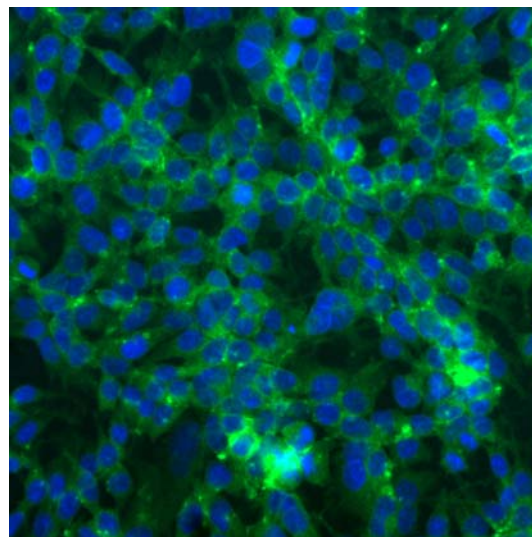
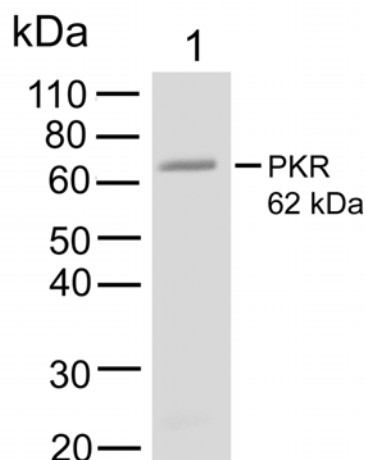
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Western blot of MCF7 cell lysate using rabbit anti-PKR (Cat. No. 700286).

Rabbit anti-PKR (1 µg/ml) was used to label PKR in MCF7 cell lysate. Lane 1 was loaded with 30 µg of lysate. The western was performed using the WesternBreeze® kit with NBT/BCIP as the substrate (Cat. No. WB7105).

Immunocytochemistry of HEK293 cells labeled with rabbit anti-PKR (Cat. No. 700286).

HEK293 cells were labeled with rabbit anti-PKR (5 µg/ml) using Alexa Fluor® 488 goat anti-rabbit as the secondary antibody (Cat. No. A11008), at a 1:1000 dilution. Cells were fixed using 4% paraformaldehyde. Cytoplasmic localization of PKR specific signal is shown in green, while nuclei were stained using SlowFade® GOLD with DAPI (Cat. No. S36938) shown in blue.

Explanation of symbols

Symbol	Description	Symbol	Description
	Catalogue Number		Batch code
	Research Use Only		In vitro diagnostic medical device
	Use by		Temperature limitation
	Manufacturer		European Community authorised representative
	Without, does not contain		With, contains
	Protect from light		Consult accompanying documents
	Directs the user to consult instructions for use (IFU), accompanying the product.		

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