Technical Data Sheet

Purified Mouse Anti-Human PKR

Product Information

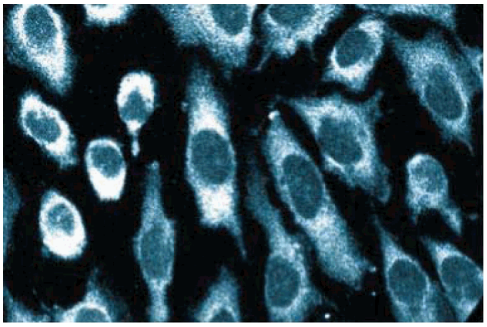
Material Number:	**610764**
Alternate Name:	Protein Kinase R; p68 Kinase; TIK
Size:	50 µg
Concentration:	250 µg/ml
Clone:	13/PKR
Immunogen:	Human p68 Kinase aa. 117-250
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	68 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Double stranded RNA (dsRNA) generated by most viruses during the infectious cycle is a potent stimulator of interferons. Interferons bind to cell surface receptors and stimulate the synthesis of several proteins that interfere with viral replication. One protein, 2'5'-oligo-adenylate synthetase, indirectly activates an endoribonuclease that degrades viral RNA. Another protein, p68 serine/threonine protein kinase (also known as PKR and TIK), is induced following interferon stimulation and activated by autophosphorylation in the presence of dsRNA. Upon activation, p68 phosphorylates the α subunit of the eukaryotic initiation factor 2 (eIF-2) resulting in inhibition of protein synthesis and, in turn, inhibition of viral replication. Evidence also suggests that p68 protein kinase inhibits proliferation and potentiates tumor suppressor function. In addition, p68 has been shown to phosphorylate Iκ-B, thus activating NF-κB which induces interferon-β gene transcription.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

Western blot analysis of PKR on a A431 cell lysate (Human epithelial carcinoma; ATCC CRL-1555). *Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of the mouse anti- human PKR antibody.*



Immunofluorescence staining of human endothelial cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunohistochemistry	Not Recommended
Immunoprecipitation	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

Catalog Number	Name	Size	Clone
611447	A431 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Barber GN, Tomita J, Hovanessian AG, Meurs E, Katze MG. Functional expression and characterization of the interferon-induced double-stranded RNA activated P68 protein kinase from Escherichia coli. *Biochemistry.* 1991; 30(42):10356-10361.(Biology)

Feng GS, Chong K, Kumar A, Williams BR. Identification of double-stranded RNA-binding domains in the interferon-induced double-stranded RNA-activated p68 kinase. *Proc Natl Acad Sci U S A.* 1992; 89(12):5447-5451.(Biology)

Lee TG, Tomita J, Hovanessian AG, Katze MG. Characterization and regulation of the 58,000-dalton cellular inhibitor of the interferon-induced, dsRNA-activated protein kinase. *J Biol Chem.* 1992; 267(20):14238-14243.(Biology)

Meurs E, Chong K, Galabru J, et al. Molecular cloning and characterization of the human double-stranded RNA-activated protein kinase induced by interferon. *Cell.* 1990; 62(2):379-390.(Biology)