Technical Data Sheet

# Purified Anti-DRBP76

## Product Information

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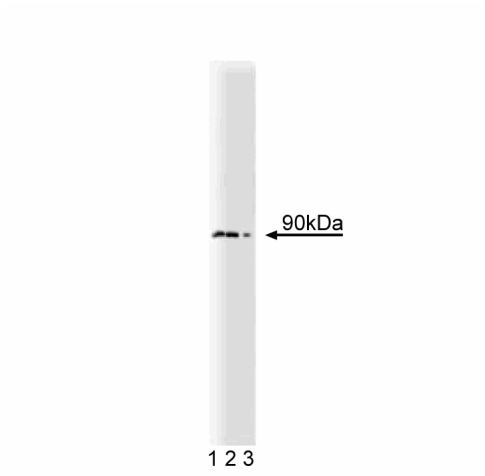
| **Material Number:** | **612155** |
| **Size:** | 150 µg |
| **Concentration:** | 250 µg/ml |
| **Clone:** | 21/DRBP76 |
| **Immunogen:** | Human DRBP76 aa. 592-695 |
| **Isotype:** | Mouse IgG1 |
| **Reactivity:** | QC Testing: Human |
| **Target MW:** | 90 kDa |
| **Storage Buffer:** | Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide. |

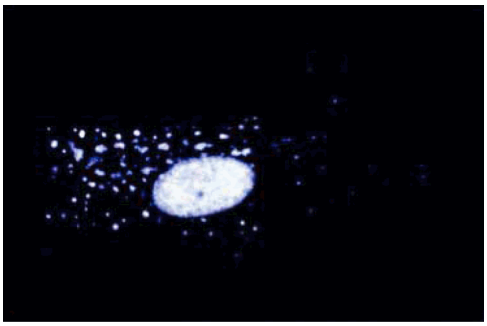
## Description

The double stranded RNA (dsRNA)-dependent, Ser/Thr protein kinase, PKR, is encoded by an IFN-inducible gene and is critical for the anti-viral responses mediated by IFN. Interaction with activators such as heparin, dsRNA, and the dsRNA-binding proteins (DRBPs), DRBP76, PACT, and RAX, induces PKR autophosphorylation and activation. DRBP76 was identified through its binding to dsRNA and PKR. In addition, DRBP76 has been identified as the alternatively spliced nuclear phosphoproteins of 90 kDa (NFAR-1/NF90) and 110 kDa (NFAR-2), as well as M-phase phosphoprotein (MPP4), translational control protein 80 (TCP80), and interleukin enhancer binding factor 3 (ILF3). DRBP76 contains a bi-partite nuclear localization signal at amino acids 369-373 and 386-394, two DRB domains in the C-terminal half, and a C-terminal RG2 domain that is present in many RNA binding proteins. DRBP76 binds pre-mRNAs and spliced mRNAs, co-localizes with PKR in the nucleus, and is phosphorylated by PKR and possibly cyclin-dependent kinases. Thus, DRBP76 may be one of multiple DRBP variants, which associate with PKR and regulate RNA translation.

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 DRBP76 on HeLa lysate.*** *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of DRBP76.*



***Immunofluorescent staining of WI-38 cells at 50 µg/ml.***

## 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**

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| Immunofluorescence | Tested During Development |
| Western blot | Routinely Tested |

## Product Notices

1. 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.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

## References


Buaas FW, Lee K, Edelhoff S, Disteche C, Braun RE. Cloning and characterization of the mouse interleukin enhancer binding factor 3 (Ilf3) homolog in a screen for RNA binding proteins. *Mamm Genome.* 1999; 10(5):451-456.(Biology)

Patel RC, Vestal DJ, Xu Z, et al. DRBP76, a double-stranded RNA-binding nuclear protein, is phosphorylated by the interferon-induced protein kinase, PKR. *J Biol Chem.* 1999; 274(29):20432-20437.(Biology)

Saunders LR, Jurecic V, Barber GN. The 90- and 110-kDa human NFAR proteins are translated from two differentially spliced mRNAs encoded on chromosome 19p13. *Genomics.* 2001; 71(2):256-259.(Biology)

Xu YH, Grabowski GA. Molecular cloning and characterization of a translational inhibitory protein that binds to coding sequences of human acid beta-glucosidase and other mRNAs. *Mol Genet Metab.* 1999; 68(4):441-454.(Biology)