



## MONOCLONAL ANTIBODY

*For research use only. Not for clinical diagnosis.*

**Catalog No. 70-325EX**

# Anti-Importin $\alpha$ 3 / KPNA4/Qip1 antibody (3D10)

### BACKGROUND

Importin $\alpha$  proteins play a pivotal role in the import of proteins from the cytoplasm to the nucleus. Importin $\alpha$  proteins shuttle between nucleus and cytoplasm, bind nuclear localization signal (NLS)-bearing proteins, and mediate the protein import into the nucleus with importin  $\beta$ . Several importin $\alpha$  isotypes have been identified, each exhibiting differential recognition and nuclear transport, probably via preferential binding to a particular NLS. The **importin $\alpha$ 3 (KPNA4, Qip1)** is a member of the importin $\alpha$  family of proteins belonging to the Qip1 subfamily.

The antibody was purified from the serum-free cultured medium of the hybridoma under mild conditions by proprietary chromatography processes.

<b>Product type</b>	Primary antibodies
<b>Host</b>	Rat
<b>Form</b>	Purified monoclonal antibody (IgG) 1mg/ml in PBS, 50% glycerol, filter-sterilized
<b>Volume</b>	200 $\mu$ g
<b>Concentration</b>	
<b>Epitope</b>	Not determined
<b>Antigen</b>	A region of NS5a protein (the nucleotide sequence is shown in ref.4) of <b>HCV genotype 1b</b> expressed in <i>E.coli</i>
<b>Clone</b>	3D10
<b>Isotype</b>	Rat IgG2a, kappa

**Application notes**

1. Western blotting (250~500 fold dilution)
2. ELISA

This antibody doesn't work for immunostaining and immunoprecipitation.  
Other applications have not been tested.

Optimal dilutions/concentrations should be determined by the end user.

**Data Link** Swiss-Prot [D3DNM2](#)

**Reactivity** Reactive with human, simian, mouse, rat, hamster, canine and bovine importin  $\alpha$ 3.  
This antibody doesn't recognize other importin $\alpha$  family including  $\alpha$ 4.

**Storage** -20°C(long period, -70°C)

**References**

1. Yoneda Y "Nucleocytoplasmic protein traffic and its significance to cell function." Review. *Genes Cells* 5: 777-787 (2000) PMID: [11029654](#)
2. Miyamoto Y et al "Differential modes of nuclear localization signal (NLS) recognition by three distinct classes of NLS receptors." *J Bio Chem* 272:26375-26381 (1997) PMID: [9334211](#)
3. Sakaguchi N et al "Generation of a rat monoclonal antibody specific for importin alpha3/Qip1." *Hybrid Hybridomics* 22: 397-400 (2003) PMID: [14683601](#)
4. Yasuhara N et al "Triggering neural differentiation of ES cells by subtype switching of importin-alpha." *Nat Cell Biol* 9:72-79 (2007) PMID: [17159997](#)

This antibody was produced and used in Ref.3 and 4.



**Anti-Importin  $\alpha$ 3 / KPNA4/Qip1 antibody (3D10)**

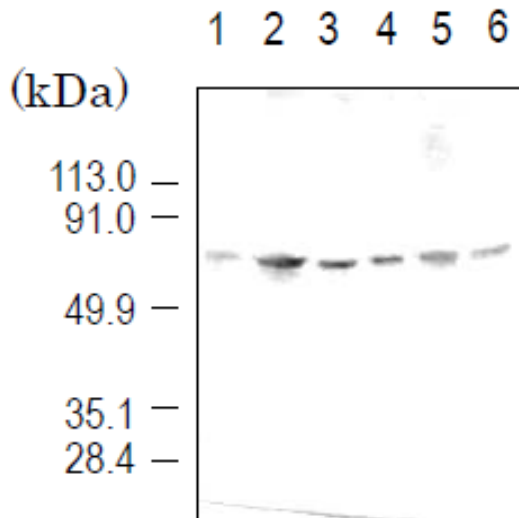


Fig.1

Detection of importin  $\alpha$ 3 (58 kD) by Western blotting using the antibody 3D10.

Sample is the total cell extract.

lane1: HeLa (human)

lane2: COS7 (simian)

lane3: L929 (mouse)

lane4: NRK (rat)

lane5: BHK (hamster)

lane6: MDBK (bovine)

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