# abcam

## Product datasheet

## Anti-Interferon alpha/beta receptor 1 antibody [EPR6244] ab124764





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Overview

**Product name** Anti-Interferon alpha/beta receptor 1 antibody [EPR6244]

**Description** Rabbit monoclonal [EPR6244] to Interferon alpha/beta receptor 1

**Host species** Rabbit

Specificity In mouse and rat tissue lysates this product detects a band in the region of 100 kDa, however we

> believe this band is non-specific and is not interferon receptor alpha as the immunogen for this antibody shares only 55% homology with the mouse and rat protein. In addition this band also

migrates at a lower molecular weight than that detected in human samples.

**Tested applications** Suitable for: WB

Unsuitable for: ICC/IF or IHC-P

Reacts with: Human Species reactivity

**Immunogen** Synthetic peptide within Human Interferon alpha/beta receptor 1 aa 100-200. The exact sequence

is proprietary.

Database link: P17181

Positive control HeLa, HeLa treated with IFN-alpha, K562 and U937 cell lysates.

**General notes** This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility

- Improved sensitivity and specificity

- Long-term security of supply

- Animal-free production

For more information see here.

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb**® **patents**.

**Properties** 

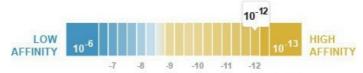
**Form** Liquid

Storage instructions Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C.

Stable for 12 months at -20°C.

Dissociation constant (K<sub>D</sub>)

 $K_D = 2.40 \times 10^{-12} M$ 



Learn more about K<sub>D</sub>

Storage buffer

pH: 7.20

Preservative: 0.01% Sodium azide

Constituents: 50% Glycerol (glycerin, glycerine), 0.05% BSA, 49% PBS

Purity

Protein A purified

Clonality

Monoclonal

Clone number

**EPR6244** 

Isotype

lgG

#### **Applications**

The Abpromise guarantee

Our <u>Abpromise guarantee</u> covers the use of ab124764 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	****(1)	1/1000 - 1/10000. Detects a band of approximately 90-130 kDa (predicted molecular weight: 64 kDa).

**Application notes** Is unsuitable for ICC/IF or IHC-P.

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**Function** Associates with IFNAR2 to form the type I interferon receptor. Receptor for interferons alpha and

beta. Binding to type I IFNs triggers tyrosine phosphorylation of a number of proteins including

JAKs, TYK2, STAT proteins and IFNR alpha- and beta-subunits themselves.

**Tissue specificity** IFN receptors are present in all tissues and even on the surface of most IFN-resistant cells.

lsoform 1, isoform 2 and isoform 3 are expressed in the IFN-alpha sensitive myeloma cell line U266S. Isoform 2 and isoform 3 are expressed in the IFN-alpha resistant myeloma cell line

U266R. Isoform 1 is not expressed in IFN-alpha resistant myeloma cell line U266R.

**Sequence similarities**Belongs to the type II cytokine receptor family.

Contains 3 fibronectin type-III domains.

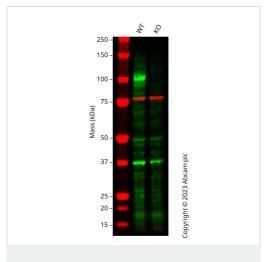
Post-translational

modifications

Phosphorylated on tyrosine residues by TYK2 tyrosine kinase.

Cellular localization Membrane.

#### Images



Western blot - Anti-Interferon alpha/beta receptor 1 antibody [EPR6244] (ab124764)

**All lanes :** Anti-Interferon alpha/beta receptor 1 antibody [EPR6244] (ab124764) at 1/1000 dilution

Lane 1: Wild-type HeLa cell lysate

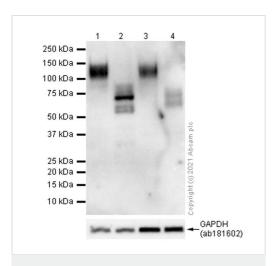
Lane 2: IFNAR1 knockout HeLa cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Predicted band size:** 64 kDa **Observed band size:** 116 kDa

Western blot: Anti-IFNAR1 antibody [EPR6244] (ab124764) staining at 1/1000 dilution, shown in green; Mouse anti-CANX [CANX/1543] (ab238078) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab124764 was shown to bind specifically to IFNAR1. A band was observed at 116 kDa in wildtype HeLa cell lysates with no signal observed at this size in IFNAR1 knockout cell line. To generate this image, wild-type and IFNAR1 knockout HeLa cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween<sup>®</sup> 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.



Western blot - Anti-Interferon alpha/beta receptor 1 antibody [EPR6244] (ab124764)

**All lanes :** Anti-Interferon alpha/beta receptor 1 antibody [EPR6244] (ab124764) at 1/1000 dilution

**Lane 1 :** Untreated K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysate. with NFDM/TBST

**Lane 2 :** K-562 (Human chronic myelogenous leukemia lymphoblast) treated with PNGase F whole cell lysate. with NFDM/TBST

**Lane 3 :** Untreated HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate. with NFDM/TBST

Lane 4: HeLa (Human cervix adenocarcinoma epithelial cell) treated with PNGase F whole cell lysate 15 µg. with NFDM/TBST

Lysates/proteins at 15 µg per lane.

Blocking peptides at 5 % per lane.

#### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (<u>ab97051</u>) at 1/20000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated.)

**Predicted band size:** 64 kDa **Observed band size:** 64.13 kDa

Exposure time: 180 seconds

All lanes: Anti-Interferon alpha/beta receptor 1 antibody

[EPR6244] (ab124764) at 1/1000 dilution (purified)

Lane 1 : Mouse brain tissue lysate

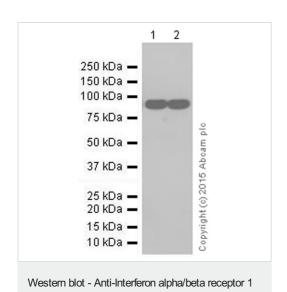
Lane 2: Rat brain tissue lysate

Lysates/proteins at 10 µg per lane.

#### Secondary

**All lanes :** Rabbit monoclonal [EPR6244] to Interferon alpha/beta receptor 1 (ab124764) at 1/1000 dilution

**Predicted band size:** 64 kDa **Observed band size:** 90 kDa



antibody [EPR6244] (ab124764)

Blocking buffer: 5% NFDM/TBST Dilution buffer: 5% NFDM/TBST

In mouse and rat tissue lysates this product detects a band in the region of 100 kDa, however we believe this band is non-specific and is not interferon receptor alpha as the immunogen for this antibody shares only 55% homology with the mouse and rat protein. In addition this band also migrates at a lower molecular weight than that detected in human samples.

1 2 3 4

250 kDa —
150 kDa —
100 kDa —
75 kDa —
50 kDa —
37 kDa —
25 kDa —
20 kDa —
15 kDa —
15 kDa —
10 kDa —

Western blot - Anti-Interferon alpha/beta receptor 1 antibody [EPR6244] (ab124764)

**All lanes :** Anti-Interferon alpha/beta receptor 1 antibody [EPR6244] (ab124764) at 1/1000 dilution (purified)

Lane 1 : HEK-293 whole cell lysate
Lane 2 : HeLa whole cell lysate
Lane 3 : LNCaP whole cell lysate
Lane 4 : SH-SY5Y whole cell lysate

Lysates/proteins at 10 µg per lane.

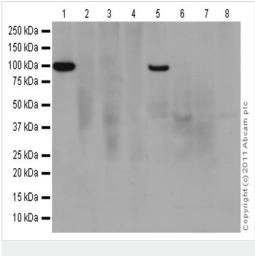
#### Secondary

**All lanes :** Goat Anti-Rabbit lgG H&L (HRP) (<u>ab97051</u>) at 1/20000 dilution

Predicted band size: 64 kDa

Observed band size: 90-130 kDa

Blocking buffer: 5% NFDM/TBST Dilution buffer: 5% NFDM/TBST



Western blot - Anti-Interferon alpha/beta receptor 1 antibody [EPR6244] (ab124764)

**All lanes :** Anti-Interferon alpha/beta receptor 1 antibody [EPR6244] (ab124764) at 1/1000 dilution (unpurified)

Lane 1 : Mouse brain whole tissue lysate

Lane 2 : Mouse heart whole tissue lysate

Lane 3: Mouse kidney whole tissue lysate

Lane 4: Mouse spleen whole tissue lysate

Lane 5: Rat brain whole tissue lysate

Lane 6: Rat heart whole cell lysate

Lane 7: Rat kidney whole cell lysate

Lane 8: Rat spleen whole tissue lysate

Lysates/proteins at 10 µg per lane.

### **Secondary**

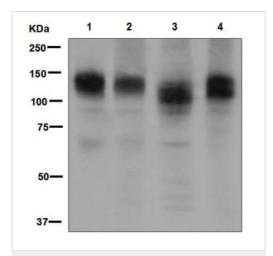
**All lanes :** Goat anti-rabbit lgG (H+L), peroxidase conjugated at 1/2000 dilution

Predicted band size: 64 kDa

Exposure time: 3 minutes

Blocking buffer: 5% NFDM/TBST.

In mouse and rat tissue lysates this product detects a band in the region of 100 kDa, however we believe this band is non-specific and is not interferon receptor alpha as the immunogen for this antibody shares only 55% homology with the mouse and rat protein. In addition this band also migrates at a lower molecular weight than that detected in human samples.



Western blot - Anti-Interferon alpha/beta receptor 1 antibody [EPR6244] (ab124764)

All lanes: Anti-Interferon alpha/beta receptor 1 antibody [EPR6244] (ab124764) at 1/1000 dilution (Unpurified)

Lane 1: HeLa cell lysate

Lane 2: HeLa cell lysate treated with IFN-alpha

Lane 3: K562 cell lysate Lane 4: U937 cell lysate

Lysates/proteins at 10 µg per lane.

## Secondary

All lanes: Goat anti-Rabbit HRP at 1/200 dilution

Predicted band size: 64 kDa

IFN alpha R1 EPR6244 Probe Conc \_\_\_ 100 nM 12.0 33 nM Surface Density (ng/mm²) 10.0 11 nM \_\_\_ 4 nM 8.0 6.0 Fit Summary kof [1/ (sec-M)] =  $(7.49 \pm 0.03)$  E4 koff [1/sec] = < 1.8 E-7 Kd [M] = < 2.4 E-12 4.0 2.0 Fit RMSE [ng/mm²] = 1.8 E-1 Median Baseline Noise [ng/mm²] = 1.3 E-1 Median Association Signal [ng/mm²] = 6.8 E0 Median Assoc. Endpoint SNR = 4.8 E1 RMSE / Noise = 1.4 E0 0.0

Ol-RD Scanning - Anti-Interferon alpha/beta receptor 1 antibody [EPR6244] (ab124764)

135

-2.0

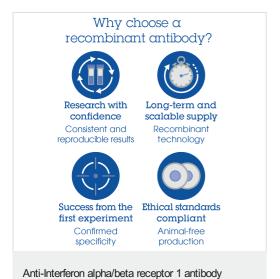
-30 0 30 60 90

Time (min)

[EPR6244] (ab124764)

Equilibrium disassociation constant (K<sub>D</sub>) Learn more about KD

Click here to learn more about KD



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