Product datasheet

Anti-Interferon alpha/beta receptor 1 antibody
ab10739

Overview

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

**Description**
Goat polyclonal to Interferon alpha/beta receptor 1

**Host species**
Goat

**Specificity**
Based on ELISA and immunoblotting, this antibody shows no cross-reactivity with recombinant human IFNGRI and IFNGRII.

**Tested applications**
**Suitable for:** Flow Cyt, ELISA, Neutralising, WB

**Species reactivity**
Reacts with: Human

**Immunogen**
Recombinant full length protein corresponding to Human Interferon alpha/beta receptor 1.
Database link: P17181

**General notes**
Endotoxin level is < 10 ng/mg antibody as determined by the LAL (Limulus amebocyte lysate) method. This antibody was used as a detection antibody in sELISA and was paired with ab91466 as capture antibody. Abreview 24657.

IFNAR1 is a member of the cytokine receptor superfamily which also includes receptors for interleukins, IFN gamma, ciliary neurotrophic factor, somatotrophin, erythropoietin, nerve growth factor, tumor necrosis factor, leukemia inhibitory factor, and oncostatin M. Some members of the family have an alpha chain with either low or high ligand binding affinity and at least one beta chain involved in signal transduction with either relatively low or no ligand binding affinity. Type I interferons, alpha and beta, induce a variety of effects on target cells including antiviral, antiproliferative, and immunomodulatory activities. The alpha and beta interferons compete to bind to a common cell surface receptor, while IFN gamma binds to a distinct receptor. IFNAR1 is very responsive to type I interferons and bind to IFN beta and IFN alpha subtypes. It is also functionally involved in signal transduction because of its association with the cytoplasmic tyrosine kinase JAK1. The type I interferons, alpha and beta, are produced by leukocytes (alpha subunits), fibroblasts (beta subtypes), lymphocytes (omega subtypes), and ruminant embryos (tau subtypes). Interferon receptors are generally found on most human cell types whatever their origin, even on cells poorly responsive to interferon. IFNAR1 is expressed on the cell surface in a variety of human cell lines.
Form
Liquid

Storage instructions
Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

Storage buffer
Constituent: PBS

Purity
Immunogen affinity purified

Purification notes
Affinity isolated antigen specific antibody is obtained from goat anti-Interferon alpha/beta receptor 1 antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Primary antibody notes
IFNAR1 is a member of the cytokine receptor superfamily which also includes receptors for interleukins, IFN gamma, ciliary neurotrophic factor, somatotrophin, erythropoietin, nerve growth factor, tumor necrosis factor, leukemia inhibitory factor, and oncostatin M. Some members of the family have an alpha chain with either low or high ligand binding affinity and at least one beta chain involved in signal transduction with either relatively low or no ligand binding affinity. Type I interferons, alpha and beta, induce a variety of effects on target cells including antiviral, antiproliferative, and immunomodulatory activities. The alpha and beta interferons compete to bind to a common cell surface receptor, while IFN gamma binds to a distinct receptor. IFNAR1 is very responsive to type I interferons and bind to IFN beta and IFN alpha subtypes. It is also functionally involved in signal transduction because of its association with the cytoplasmic tyrosine kinase JAK1. The type I interferons, alpha and beta, are produced by leukocytes (alpha subunits), fibroblasts (beta subtypes), lymphocytes (omega subtypes), and ruminant embryos (tau subtypes). Interferon receptors are generally found on most human cell types whatever their origin, even on cells poorly responsive to interferon. IFNAR1 is expressed on the cell surface in a variety of human cell lines.

Clonality
Polyclonal

Isotype
IgG

Applications

Our Abpromise guarantee covers the use of ab10739 in the following tested applications.

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

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Flow Cyt</td>
<td>Use 3-10µl for 10^6 cells.</td>
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<tr>
<td>ELISA</td>
<td>Use a concentration of 0.5 - 1 µg/ml. The detection limit for recombinant human IFNAR1 is approximately 0.3 ng/well.</td>
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<td>Neutralising</td>
<td>Use a concentration of 15 - 30 µg/ml. This will block 50% of the binding of recombinant human IFN beta (20 ng/ml) to immobilized recombinant human IFNAR1 (1 µg/ml of a 100 µl solution coated in each well) in a functional ELISA.</td>
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<tr>
<td>WB</td>
<td>Use a concentration of 0.1 - 0.2 µg/ml. Predicted molecular weight: 135 kDa. The detection limit for recombinant human IFN-α/β R1 is 0.25 ng/lane and 5 ng/lane under non-reducing and reducing conditions, respectively.</td>
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Target

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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. Isoform 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.

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