Product datasheet

Anti-PDGFR beta antibody [Y92] - C-terminal ab32570

Overview

Product name                  Anti-PDGFR beta antibody [Y92] - C-terminal
Description                  Rabbit monoclonal [Y92] to PDGFR beta - C-terminal
Host species                 Rabbit
Specificity                  This antibody recognizes human platelet-derived growth factor (PDGF) receptor beta. It does not cross-react with other CSF-1/PDGF receptor family members. Expression levels of the target protein vary with sample type and some optimisation may be required.

Tested applications          Suitable for: IHC-Fr, Flow Cyt, IHC-FoFr, WB, IHC-P, ICC/IF, IP, IHC-FrFl
Species reactivity           Reacts with: Mouse, Rat, Human
Immunogen                    Synthetic peptide within Human PDGFR beta aa 1050 to the C-terminus. The exact sequence is proprietary.


General notes                Abcam recommended secondaries - Goat Anti-Rabbit HRP (ab205718) and Goat Anti-Rabbit Alexa Fluor® 488 (ab150077).
                              See other anti-rabbit secondary antibodies that can be used with this antibody.
                              Our RabMab® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMab® patents.
                              We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.
                              This product is a recombinant rabbit monoclonal antibody.

Properties

Form                        Liquid
Storage instructions        Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
**Storage buffer**
- pH: 7.20
- Preservative: 0.01% Sodium azide
- Constituents: PBS, 40% Glycerol, 0.05% BSA

**Purity**
- Protein A purified

**Clonality**
- Monoclonal

**Clone number**
- Y92

**Isotype**
- IgG

### Applications

Our **Abpromise guarantee** covers the use of ab32570 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>
</tr>
</thead>
<tbody>
<tr>
<td>IHC-Fr</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>Flow Cyt</td>
<td>1/20.</td>
<td></td>
</tr>
<tr>
<td>IHC-FoFr</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>WB</td>
<td>1/5000 - 1/20000.</td>
<td>Predicted molecular weight: 124 kDa. For samples expressing low levels of PDGFR beta, the amount of lysate loaded may need to be increased to allow detection.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>1/50 - 1/500.</td>
<td>Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See <a href="#">IHC antigen retrieval protocols</a>. Optimisation of the IHC protocol may be required depending on the sample used.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td>1/100.</td>
<td></td>
</tr>
<tr>
<td>IP</td>
<td>1/20.</td>
<td></td>
</tr>
<tr>
<td>IHC-FrFl</td>
<td></td>
<td>Use at an assay dependent concentration. PubMed: 25077029</td>
</tr>
</tbody>
</table>

### Target

**Function**
- Receptor that binds specifically to PDGFB and PDGFD and has a tyrosine-protein kinase activity. Phosphorylates Tyr residues at the C-terminus of PTPN11 creating a binding site for the SH2 domain of GRB2.

**Involvement in disease**
- Note=A chromosomal aberration involving PDGFRB is found in a form of chronic myelomonocytic leukemia (CMML). Translocation t(5;12)(q33;p13) with EVT6/TEL. It is characterized by abnormal clonal myeloid proliferation and by progression to acute myelogenous leukemia (AML).
- Note=A chromosomal aberration involving PDGFRB may be a cause of acute myelogenous leukemia. Translocation t(5;14)(q33;q32) with TRIP11. The fusion protein may be involved in clonal evolution of leukemia and eosinophilia.
- Note=A chromosomal aberration involving PDGFRB may be a cause of juvenile myelomonocytic leukemia. Translocation t(5;17)(q33;p11.2) with SPECC1.
Defects in PDGFRB are a cause of myeloproliferative disorder chronic with eosinophilia (MPE) [MIM:131440]. A hematologic disorder characterized by malignant eosinophilia proliferation. 

Note=A chromosomal aberration involving PDGFRB is found in many instances of myeloproliferative disorder chronic with eosinophilia. Translocation t(5;12) with ETV6 on chromosome 12 creating an PDGFRB-ETV6 fusion protein.

Note=A chromosomal aberration involving PDGFRB may be the cause of a myeloproliferative disorder (MBD) associated with eosinophilia. Translocation t(1;5)(q23;q33) that forms a PDE4DIP-PDGFRB fusion protein.

**Sequence similarities**

Belongs to the protein kinase superfamily. Tyr protein kinase family. CSF-1/PDGF receptor subfamily.

Contains 5 Ig-like C2-type (immunoglobulin-like) domains.

Contains 1 protein kinase domain.

**Post-translational modifications**

Autophosphorylated. Dephosphorylated by PTPRJ at Tyr-751, Tyr-857, Tyr-1009 and Tyr-1021.

**Cellular localization**

Membrane.

**Immunohistochemical staining of paraffin embedded human spleen with purified ab32570 at a working dilution of 1/50.** The secondary antibody used is **ab97051**, a HRP-conjugated goat anti-rabbit IgG (H+L), at a dilution of 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.
Anti-PDGFR beta antibody [Y92] - C-terminal (ab32570) at 1/10000 dilution (purified) + SH-SY5Y (Human neuroblastoma cell line from bone marrow) cell lysate at 10 µg

**Secondary**

HRP goat anti-rabbit (H+L) at 1/1000 dilution

**Predicted band size:** 124 kDa

**Observed band size:** 175 kDa

why is the actual band size different from the predicted?

Blocking buffer: 5% NFDM/TBST

Dilution buffer: 5% NFDM/TBST

Immunofluorescence analysis of NIH/3T3 (Mouse embryo fibroblast cell line) cells stimulated with PDGF, staining PDGFR beta with unpurified ab32570.
Flow cytometry analysis of NIH/3T3 (Mouse embryo fibroblast cell line) cells labeling PDGFR beta (red) with ab32570 at a 1/20 dilution. Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (ab172730). Blue (unlabeled control) - Cells without incubation with primary and secondary antibodies.

Immunofluorescence staining of NIH/3T3 (Mouse embryo fibroblast cell line) cells with purified ab32570 at a working dilution of 1 in 100, counter-stained with DAPI. Tubulin was stained with mouse anti-tubulin at a dilution of 1/1000 (ab7291) and Alexa Fluor® 594 goat anti-mouse at a dilution of 1/500 (ab150120). The secondary antibody was ab150077 Alexa Fluor® 488 goat anti rabbit, used at a dilution of 1 in 500. The cells were fixed in 4% PFA and permeabilized using 0.1% Triton X 100.

The negative controls are shown in the bottom middle and right hand panels - for the first negative control, purified ab32570 was used at a dilution of 1/200 followed by an Alexa Fluor® 555 goat anti-mouse antibody at a dilution of 1/500 and for the second negative control mouse primary antibody (ab7291) and anti-rabbit secondary antibody (ab15007) were used.
ab32570 staining PDGFR beta in human lung cancer tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Shows positive staining on stromal cells. Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). Samples were incubated with primary antibody (1/500). An HRP-conjugated Goat anti-rabbit IgG (ready to use) was used as the secondary antibody. Counter stained with Hematoxylin.

ab32570 staining PDGFR beta in human breast tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Shows positive staining on stromal cells. Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). Samples were incubated with primary antibody (1/500). An HRP-conjugated Goat anti-rabbit IgG (ready to use) was used as the secondary antibody. Counter stained with Hematoxylin.
Western blot - Anti-PDGFR beta antibody [Y92] - C-terminal (ab32570)

Anti-PDGFR beta antibody [Y92] - C-terminal (ab32570) at 1/5000 dilution (purified) + Human fetal brain tissue lysate at 10 µg

Secondary
HRP goat anti-rabbit (H+L) at 1/1000 dilution

Predicted band size: 124 kDa
Observed band size: 175 kDa why is the actual band size different from the predicted?

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

Western blot - Anti-PDGFR beta antibody [Y92] - C-terminal (ab32570)

Ant–PDGFR beta antibody [Y92] - C-terminal (ab32570) at 1/50000 dilution (purified) + NIH/3T3 (Mouse embryo fibroblast cell line) cell lysate at 10 µg

Secondary
HRP goat anti-rabbit (H+L) at 1/1000 dilution

Predicted band size: 124 kDa
Observed band size: 175 kDa why is the actual band size different from the predicted?

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST
All lanes: Anti-PDGFR beta antibody [Y92] - C-terminal (ab32570) at 1/10000 dilution (purified)

Lane 1: Rat brain tissue lysate
Lane 2: Rat heart tissue lysate
Lane 3: Mouse brain tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes: HRP goat anti-rabbit (H+L) at 1/1000 dilution

Predicted band size: 124 kDa
Observed band size: 175 kDa why is the actual band size different from the predicted?

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

ab32570 (purified) at 1/20 immunoprecipitating PDGFR beta in NIH/3T3 (Mouse embryo fibroblast cell line) (Lane 1 and 2). Lane 3 - PBS.

For western blotting a HRP-conjugated anti-rabbit IgG specific to the non-reduced form of IgG was used as the secondary antibody (1/1500).

Blocking buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.

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