abcam

## Product datasheet

# Human PDGFRB knockout SH-SY5Y cell lysate ab275523

3 Images

### Overview

| | |
|---|---|
| **Product name** | Human PDGFRB knockout SH-SY5Y cell lysate |
| **Product overview** | Knockout cell lysate achieved by CRISPR/Cas9. |
| **Parental Cell Line** | SHSY-5Y |
| **Organism** | Human |
| **Mutation description** | Knockout achieved by using CRISPR/Cas9, Homozygous: 5 bp deletion in exon 3 |
| **Passage number** | <20 |
| **Knockout validation** | Sanger Sequencing, Western Blot (WB) |
| **Reconstitution notes** | To use as WB control, resuspend the lyophilizate in 50 µL of LDS* Sample Buffer to have a final concentration of 2 mg/ml. For reducing conditions, we recommend a final concentration of 0.1 M DTT.<br>**Usage of SDS sample buffer is not recommended with these lyophilized lysates.* |
| **Notes** | **Lysate preparation:** Our lysates are made using RIPA buffer to which we add a protease inhibitor cocktail and phosphatase inhibitor cocktail (ratio: 300:100:10). *This means that the protein of interest is denatured.* If you require a native form of the protein please use the live cell version - found **here**. Please refer to our lysis protocol for further details on how our lysates are prepared.<br><br>**User storage instructions:** Lyophilizate may be stored at 4°C. After reconstitution, store at -20°C for short-term storage or -80°C for long-term storage.<br><br>Access thousands of knockout cell lysates, generated from commonly used cancer cell lines.<br>**See here for more information on knockout cell lysates.**<br><br>Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.<br>It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.<br><br>This product is subject to limited use licenses from The Broad Institute and ERS Genomics Limited, and is developed with patented technology. For full details of the limited use licenses and relevant patents please refer to our **limited use license** and **patent pages**. |
| **Tested applications** | **Suitable for:** WB |

## Properties

**Storage instructions** Store at -80°C. Please refer to protocols.

| Components | 1 kit |
|---|---|
| ab277351 - Human PDGFRB knockout SHSY-5Y cell lysate | 1 x 100µg |
| ab277350 - Human wild-type SHSY-5Y cell lysate | 1 x 100µg |

**Cell type** neuroblastoma

**Disease** Neuroblastoma

**Gender** Female

## 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 eosinophils 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.

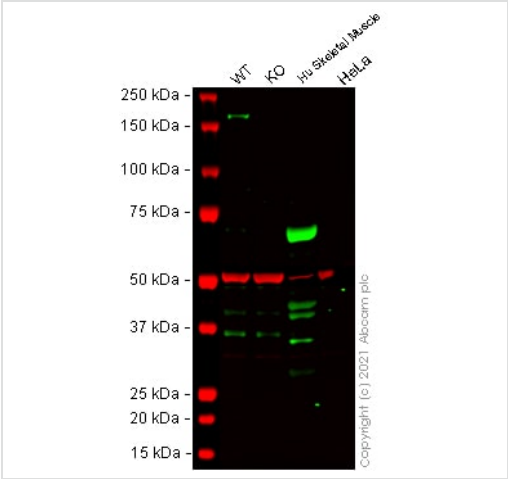
## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab275523 in the following tested applications.

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

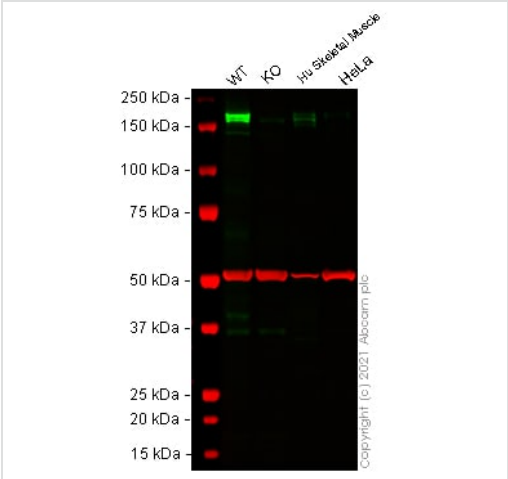
| Application | Abreviews | Notes |
|---|---|---|
| **WB** | | Use at an assay dependent concentration. |

## Images




Western blot - Human PDGFRB knockout SHSY-5Y cell lysate (ab275523)

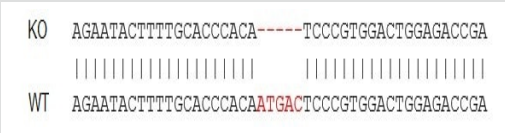
**Lane 1:** Wild-type SH-SY5Y cell lysate 30 ug
**Lane 2:** PDGFRB knockout SH-SY5Y cell lysate 30 ug
**Lane 3:** Human Skeletal Muscle tissue lysate 30 ug
**Lane 4:** HeLa cell lysate 30 ug
**Lanes 1 - 4:**Merged signal (red and green). Green - **ab69506** observed at 170 kDa. Red - loading control **ab52866** (Rabbit anti-alpha Tubulin antibody [EP1332Y]) observed at 55kDa.
**ab69506** was shown to react with PDGFR beta in wild-type SH-SY5Y cells in Western blot with loss of signal observed in PDGFRB knockout cell line **ab273749** (knockout cell lysate ab275523). Wild-type SH-SY5Y and PDGFRB knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3 % milk in TBS-T (0.1 % Tween®) before incubation with **ab69506** and **ab52866** (Rabbit anti-alpha Tubulin antibody [EP1332Y]) overnight at 4 °C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed (**ab216772**) and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed (**ab216777**) secondary antibodies at 1 in 20000 dilution for 1 h at room temperature before imaging.




Western blot - Human PDGFRB knockout SHSY-5Y cell lysate (ab275523)

**Lane 1:** Wild-type SH-SY5Y cell lysate 30 ug
**Lane 2:** PDGFRB knockout SH-SY5Y cell lysate 30 ug
**Lane 3:** Human Skeletal Muscle tissue lysate 30 ug
**Lane 4:** HeLa cell lysate 30 ug
**Lanes 1 - 4:**Merged signal (red and green). Green - **ab32570** observed at 170 kDa. Red - loading control **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) observed at 55kDa.
**ab32570** was shown to react with PDGFRB in wild-type SH-SY5Y cells in Western blot with loss of signal observed in PDGFRB knockout cell line **ab273749** (knockout cell lysate ab275523). Wild-type SH-SY5Y and PDGFRB knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in fluorescent western blot (TBS-based) blocking solution before incubation with **ab32570** and **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) overnight at 4 °C at a 1 in 5000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye®

680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 h at room temperature before imaging.




Sanger Sequencing - Human PDGFRB knockout SHSY-5Y cell lysate (ab275523)

Allele-1: 5 bp deletion in exon 3

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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