abcam

Product datasheet

Human TYROBP knockout THP-1 cell lysate ab273774

2 Images

Overview

Product name	Human TYROBP knockout THP-1 cell lysate
Product overview	Western blot data indicates that the CRISPR gene edit may have resulted in a truncation of the protein of interest. Please see data images.
Parental Cell Line	THP-1
Organism	Human
Mutation description	Knockout achieved by CRISPR/Cas9; X = 1 bp insertion; Frameshift = 99%
Passage number	<20
Knockout validation	Next Generation Sequencing (NGS)
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. **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. **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. Access thousands of knockout cell lysates, generated from commonly used cancer cell lines. **See here for more information on knockout cell lysates.** 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. 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. This product is subject to limited use licenses from The Broad Institute, ERS Genomics Limited and Sigma-Aldrich Co. LLC, and is developed with patented technology. For full details of the licenses and 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
ab280624 - Human TYROBP knockout THP-1 cell lysate	1 x 100µg
ab269602 - Human wild-type THP-1 cell lysate	1 x 100µg

Cell type acute monocytic leukemia

Disease Acute Monocytic Leukemia

Gender Male

Target

Function Non-covalently associates with activating receptors of the CD300 family. Cross-linking of CD300-TYROBP complexes results in cellular activation.

Tissue specificity Expressed at low levels in the early development of the hematopoietic system and in the promonocytic stage and at high levels in mature monocytes. Expressed in hematological cells and tissues such as peripheral blood leukocytes and spleen. Also found in bone marrow, lymph nodes, placenta, lung and liver. Expressed at lower levels in different parts of the brain especially in the basal ganglia and corpus callosum.

Involvement in disease Defects in TYROBP are a cause of polycystic lipomembranous osteodysplasia with sclerosing leukoencephalopathy (PLOSL) [MIM:221770]; also called presenile dementia with bone cysts or Nasu-Hakola disease (NHD). PLOSL is a recessively inherited disease characterized by a combination of psychotic symptoms rapidly progressing to presenile dementia and bone cysts restricted to wrists and ankles. PLOSL has a global distribution, although most of the patients have been diagnosed in Finland and Japan, with an estimated population prevalence of 2x10(-6) in the Finns.

Sequence similarities Belongs to the TYROBP family.

Post-translational modifications Tyrosine phosphorylated.

Cellular localization Membrane.

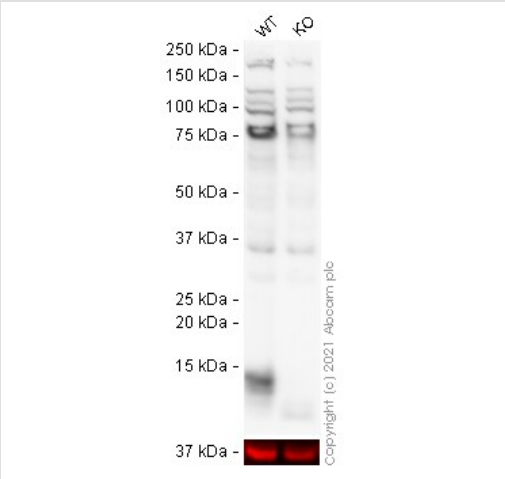
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab273774 in the following tested applications.

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

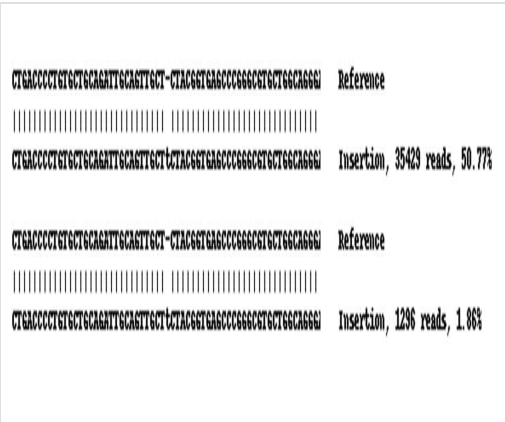
Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Predicted molecular weight: 12 kDa. Western blot data indicates that the CRISPR gene edit may have resulted in a truncation of the protein of interest. Please see data images.

Images



Western blot - Human TYROBP knockout THP-1 cell lysate (ab273774)

Lane 1: Wild-type THP-1 cell lysate 40 µg
Lane 2: TYROBP knockout THP-1 cell lysate 40 µg
False colour image of Western blot: Anti-DAP12 antibody staining at 1 µg/ml, shown in black; Mouse anti-GAPDH antibody [6C5] (**ab8245**) loading control staining at 1/20000 dilution, shown in red. In Western blot, **ab93846** was shown to bind specifically to DAP12. A band was observed at 12 kDa in wild-type THP-1 cell lysates with no signal observed at this size in TYROBP knockout cell line **ab273726** (knockout cell lysate ab273774). The band observed in the knockout lysate lane below 12 kDa is likely to represent a truncated form of DAP12. This has not been investigated further and the functional properties of the gene product have not been determined. To generate this image, wild-type and TYROBP knockout THP-1 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5 % BSA in TBS-0.1 % Tween® 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 before development with Optiblot (ECL reagent **ab133456**) and imaged with 2 minutes exposure time. Secondary antibodies used were HRP conjugated Goat anti-Rabbit (H+L) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) at 1/20000 dilution.



Next Generation Sequencing - Human TYROBP knockout THP-1 cell lysate (ab273774)

Knockout achieved by CRISPR/Cas9; X = 1 bp insertion; Frameshift = 99%

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