abcam

Product datasheet

Human STAT2 knockout A549 cell lysate ab257184

2 Images

Overview

Product name	Human STAT2 knockout A549 cell lysate
Product overview	Knockout cell lysate achieved by CRISPR/Cas9.
Parental Cell Line	A549
Organism	Human
Mutation description	Knockout achieved by using CRISPR/Cas9, 1 bp deletion in exon2.
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. **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 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
ab262039 - Human STAT2 knockout A549 cell lysate	1 x 100µg
ab255554 - Human wild-type A549 cell lysate	1 x 100µg

Cell type epithelial

Disease Carcinoma

STR Analysis Amelogenin X,Y D5S818: 11 D13S317: 11 D7S820: 8, 11 D16S539: 11, 12 vWA: 14 TH01: 8,9.3 TPOX: 8,11 CSF1PO: 10, 12

Target

Function Signal transducer and activator of transcription that mediates signaling by type I IFNs (IFN-alpha and IFN-beta). Following type I IFN binding to cell surface receptors, Jak kinases (TYK2 and JAK1) are activated, leading to tyrosine phosphorylation of STAT1 and STAT2. The phosphorylated STATs dimerize, associate with ISGF3G/IRF-9 to form a complex termed ISGF3 transcription factor, that enters the nucleus. ISGF3 binds to the IFN stimulated response element (ISRE) to activate the transcription of interferon stimulated genes, which drive the cell in an antiviral state.

Sequence similarities Belongs to the transcription factor STAT family.
Contains 1 SH2 domain.

Post-translational modifications Tyrosine phosphorylated in response to IFN-alpha.

Cellular localization Cytoplasm. Nucleus. Translocated into the nucleus upon activation by IFN-alpha/beta.

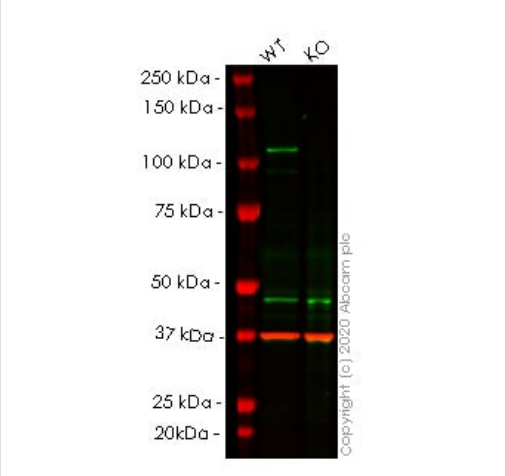
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab257184 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: 97 kDa.

Images



Western blot - Human STAT2 knockout A549 cell lysate (ab257184)

Lane 1: Wild-type A549 cell lysate (20µg)

Lane 2: STAT2 knockout A549 cell lysate (20µg)

Lanes 1- 2: Merged signal (red and green). Green - **ab32367** observed at 97 kDa. Red - loading control **ab8245** observed at 37 kDa.

ab32367 Anti-STAT2 antibody [Y141] was shown to specifically react with STAT2 in wild-type A549 cells in western blot. Loss of signal was observed when knockout cell line **ab267005** (knockout cell lysate ab257184) was used. Wild-type and STAT2 knockout samples were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. **ab32367** and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 in 5000 and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

Sanger Sequencing - Human STAT2 knockout A549 cell lysate (ab257184)

Homozygous: 1 bp deletion in exon2

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