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Product datasheet

STAT1 (pY701) ELISA Kit ab126456

5 图像

概述

产品名称	STAT1 (pY701) ELISA试剂盒
检测方法	Colorimetric
样品类型	Cell Lysate
检测类型	Semi-quantitative
检测时间	5h 00m
实验步骤	Multiple steps standard assay
种属反应性	**与反应:** Mouse, Human
产品概述	STAT1 (pY701) ELISA Kit is a very rapid, convenient and sensitive assay kit that can monitor the activation or function of important biological pathways in human and mouse cell lysates. By determining phosphorylated STAT1 protein in your experimental model system, you can verify pathway activation in your cell lysates. You can simultaneously measure numerous different cell lysates without spending excess time and effort in performing a Western Blotting analysis. This Sandwich ELISA kit is an in vitro enzyme-linked immunosorbent assay for the measurement of Human and Mouse phospho-STAT1 (Tyr701). An anti-phospho-STAT1 (Tyr701) antibody has been coated onto a 96-well plate. Samples are pipetted into the wells and phosphorylated STAT1 (Tyr701) present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated STAT1 antibody is used to detect phosphorylated STAT1. After washing away unbound antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of STAT1 (Tyr701) bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm. Get higher sensitivity in only 90 minutes with STAT1 (pY701) ELISA Kit (**ab176653**) from our SimpleStep ELISA® range.
说明	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.
平台	Microplate

性能

存放说明 Store at -20°C. Please refer to protocols.

组件	1 x 96 tests
20X Wash Buffer	1 x 25ml
2X Cell Lysis Buffer	1 x 5ml
5X Assay Diluent	1 x 15ml
HRP-conjugated anti-rabbit IgG 500X concentrate	1 x 25µl
Pan STAT1 Microplate (12 strips x 8 wells) coated with anti-pan- STAT1.	1 unit
Phospho Detection Antibody STAT1 (Tyr701)	2 vials
Positive Control: lyophilized powder from A431 cell lysate	1 vial
Stop Solution	1 x 8ml
TMB One-Step Substrate Reagent	1 x 12ml

功能 Signal transducer and activator of transcription that mediates signaling by interferons (IFNs). Following type I IFN (IFN-alpha and IFN-beta) 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. In response to type II IFN (IFN-gamma), STAT1 is tyrosine- and serine-phosphorylated. It then forms a homodimer termed IFN-gamma-activated factor (GAF), migrates into the nucleus and binds to the IFN gamma activated sequence (GAS) to drive the expression of the target genes, inducing a cellular antiviral state.

疾病相关 Note=STAT1 deficiency results in impaired immune response leading to severe mycobacterial and viral diseases. In the case of complete deficiency, patients can die of viral disease. Defects in STAT1 are a cause of mendelian susceptibility to mycobacterial disease (MSMD) [MIM:209950]; also known as familial disseminated atypical mycobacterial infection. This rare condition confers predisposition to illness caused by moderately virulent mycobacterial species, such as Bacillus Calmette-Guerin (BCG) vaccine and environmental non-tuberculous mycobacteria, and by the more virulent Mycobacterium tuberculosis. Other microorganisms rarely cause severe clinical disease in individuals with susceptibility to mycobacterial infections, with the exception of Salmonella which infects less than 50% of these individuals. The pathogenic mechanism underlying MSMD is the impairment of interferon-gamma mediated immunity whose severity determines the clinical outcome. Some patients die of overwhelming mycobacterial disease with lepromatous-like lesions in early childhood, whereas others develop, later in life, disseminated but curable infections with tuberculoid granulomas. MSMD is a genetically heterogeneous disease with autosomal recessive, autosomal dominant or X-linked inheritance.

序列相似性 Belongs to the transcription factor STAT family.
Contains 1 SH2 domain.

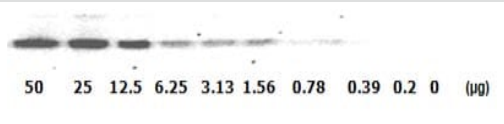
翻译后修饰 Phosphorylated on tyrosine and serine residues in response to IFN-alpha, IFN-gamma, PDGF and EGF. Phosphorylation on Tyr-701 (lacking in beta form) by JAK promotes dimerization and

subsequent translocation to the nucleus. Phosphorylation on Ser-727 by several kinases including MAPK14, ERK1/2 and CAMKII on IFN-gamma stimulation, regulates STAT1 transcriptional activity. Phosphorylation on Ser-727 promotes sumoylation though increasing interaction with PIAS. Phosphorylation on Ser-727 by PKCdelta induces apoptosis in response to DNA-damaging agents.
Sumoylated by SUMO1, SUMO2 and SUMO3. Sumoylation is enhanced by IFN-gamma-induced phosphorylation on Ser-727, and by interaction with PIAS proteins. Enhances the transactivation activity.
ISGylated.

细胞定位

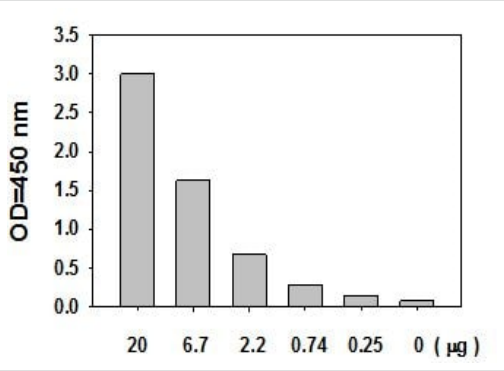
Cytoplasm. Nucleus. Translocated into the nucleus in response to IFN-gamma-induced tyrosine phosphorylation and dimerization.

图片



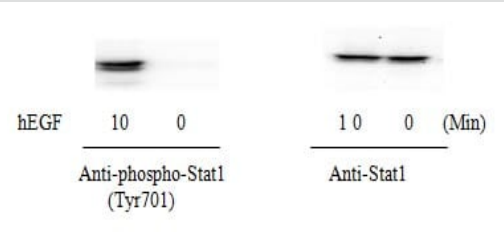
Western blot - STAT1 (pY701) ELISA Kit (ab126456)

The A431 cells were treated with 100 ng/mL recombinant Human EGF for 20 minutes to induce phosphorylation of EGF R. Serial dilutions of lysates were analyzed by western blot. Immunoblots were incubated with anti-phospho-STAT1 (Tyr701).



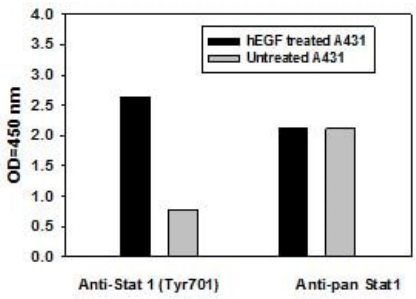
Sandwich ELISA - STAT1 (pY701) ELISA Kit (ab126456)

A431 cells were treated with 100 ng/mL recombinant Human EGF for 20 minutes to induce phosphorylation of EGF R. Serial dilutions of lysates were analyzed using ab126456.



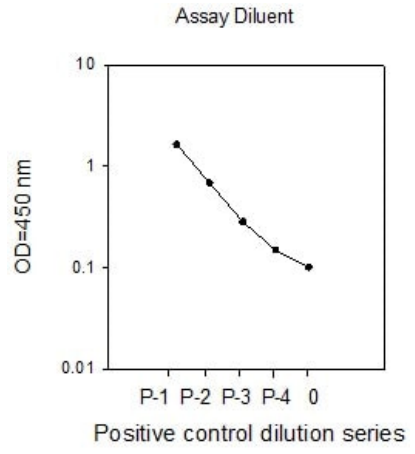
Western blot - STAT1 (pY701) ELISA Kit (ab126456)

A431 cells were treated or untreated with 100 ng/ml recombinant Human EGF for 10 min. Cell lysates were analyzed by Western Blot.



Sandwich ELISA - STAT1 (pY701) ELISA Kit (ab126456)

A431 cells were treated or untreated with 100 ng/ml recombinant Human EGF for 10 min. Cell lysates were analyzed using ab126456.



Sandwich ELISA - STAT1 (pY701) ELISA Kit (ab126456)

A431 cells were treated with recombinant Human EGF at 37°C for 20 min. Solubilize cells at 4 x 10^7 cells/ml in Cell Lysate Buffer. Serial dilutions of lysates were analyzed using ab126456.

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