abcam

Product datasheet

Anti-STAT1 (phospho Y701) antibody [EPR3147] ab109457

リコンビナント RabMAb

★★★★★ 1 Abreviews 8 References 画像数 4

製品の概要

製品名	Anti-STAT1 (phospho Y701) antibody [EPR3147]
製品の詳細	Rabbit monoclonal [EPR3147] to STAT1 (phospho Y701)
由来種	Rabbit
特異性	*Stimulation may be required to allowdetection of the phosphorylated protein. Please see images belowfor recommended treatment conditions and positive controls.*
アプリケーション	**適用あり:** WB, Dot blot **適用なし:** Flow Cyt,ICC/IF,IHC-P or IP
種交差性	**交差種:** Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	WB: A431 cell lysate treated with EGF.
特記事項	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at -20ºC.
バッファー	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant

精製度	Protein A purified
ポリ/モノ	モノクローナル
クローン名	EPR3147
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、次のテスト済みアプリケーションにおけるab109457の使用に適用されます**

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
WB	★★★★★ (1)	1/1000 - 1/10000. Predicted molecular weight: 87 kDa.
Dot blot		1/1000.

追加情報 Is unsuitable for Flow Cyt,ICC/IF,IHC-P or IP.

ターゲット情報

機能 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.

関連疾患 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.

配列類似性 Belongs to the transcription factor STAT family.
Contains 1 SH2 domain.

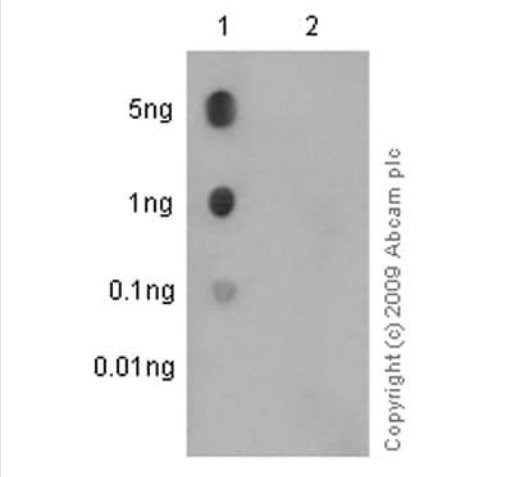
翻訳後修飾 Phosphorylated on tyrosine and serine residues in response to IFN-alpha, IFN-gamma, PDGF and EGF. Phosphorylation on Tyr-701 (lacking in beta form) by JAK promotes dimerization and

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.

細胞内局在

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

画像



Dot Blot - Anti-STAT1 (phospho Y701) antibody [EPR3147] (ab109457)

Primary antibody dilution: 1/1000

Secondary antibody: goat anti-rabbit IgG, (H+L), peroxidase conjugated

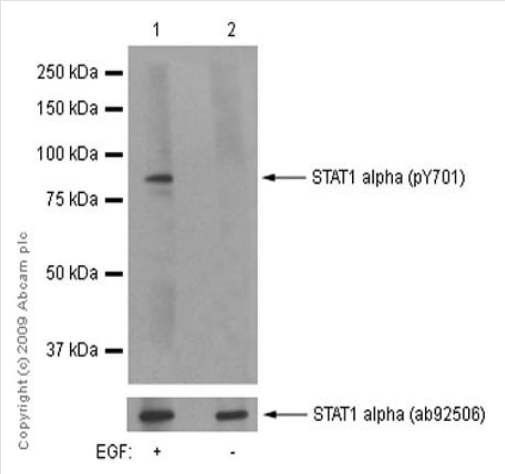
Secondary antibody dilution: 1/2500

Blocking & dilution buffer: 5% NFDM/TBST

Lane 1 sample: STAT1 (pY701) phospho peptide

Lane 2 sample: STAT1 non-phospho peptide

Exposure time: 3 minutes



Western blot - Anti-STAT1 (phospho Y701) antibody [EPR3147] (ab109457)

All lanes : Anti-STAT1 (phospho Y701) antibody [EPR3147] (ab109457)

Lane 1 : A431 (Human epidermoid carcinoma) treated with Epidermal Growth Factor (EGF) whole cell lysates
Lane 2 : Untreated A431 (human epidermoid carcinoma) whole cell lysates

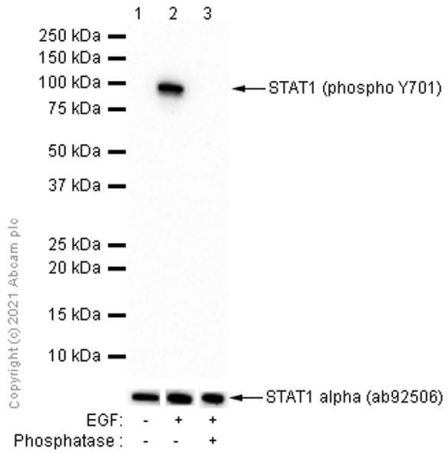
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat anti-rabbit IgG, (H+L), peroxidase conjugated at 1/1000 dilution

Predicted band size: 87 kDa
Observed band size: 91 kDa

Exposure time: 3 minutes

Blocking and dilution buffer: 5% NFDM /TBST



Western blot - Anti-STAT1 (phospho Y701) antibody [EPR3147] (ab109457)

All lanes : Anti-STAT1 (phospho Y701) antibody [EPR3147] (ab109457) at 1/1000 dilution (purified)

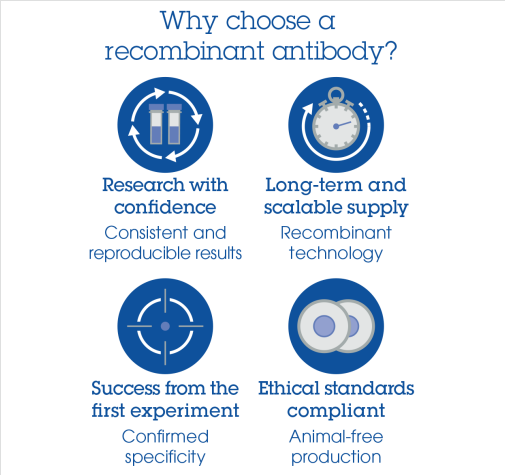
Lane 1 : Untreated A431 (Human epidermoid carcinoma epithelial cell) whole cell lysate at 15 µg
Lane 2 : A431 treated with 100ng/ml Epidermal Growth Factor (EGF) for 30 min whole cell lysate at 15 µg
Lane 3 : A431 treated with 100ng/ml Epidermal Growth Factor (EGF) for 30 min whole cell lysate, then the membrane was incubated with Alkaline Phosphatase for 1 hour

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 87 kDa
Observed band size: 91 kDa

Exposure time: 60 seconds

Blocking and diluting buffer and concentration: 5% NFDM/TBST



Anti-STAT1 (phospho Y701) antibody [EPR3147]

(ab109457)

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