ANTIBODIES ONLINE

Datasheet for ABIN94471

anti-STAT1 antibody

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Overview

Quantity:	100 μg
Target:	STAT1
Reactivity:	Human, Mouse
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This STAT1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunoprecipitation (IP), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p))

Product Details

Purpose:	Anti-STAT1 Purified
Immunogen:	STAT1 peptide sequence 721-733 (DNLLPMSPEEFDE).
Clone:	SM1
Isotype:	IgG2b
Specificity:	The antibody SM1 recognizes an epitope included within amino acids 721-733 of STAT1, a 91 kDa transcriptional factor involved in a variety of systems including antiviral responses and interferon alpha (IFN-alpha) and gamma (IFN-gamma) signal transduction.
Cross-Reactivity (Details):	Mouse, Human, Other not tested
Purification:	Purified by protein-A affinity chromatography.
Purity:	> 95 % (by SDS-PAGE)

Target Details

Target:	STAT1
Alternative Name:	STAT1 (STAT1 Products)
Background:	Signal transducer and activator of transcription 1,STAT1 (signal transducer and activator of transcription 1) is a transcription factor that plays important roles in growth arrest, apoptosis promoting and tumour suppression. After ligation of cytokine receptors STAT1 becomes phosphorylated on Tyr701 by Janus kinase JAK1 or JAK2, dimerizes, translocates to nucleus and contacts DNA. STAT1-STAT2 heterodimers serve as more potent transcriptional inducers than STAT1 homodimers. STAT1 is also phosphorylated on Ser727 by MAPK pathway, independently of tyrosine phosphorylation. However, the both modifications are important for its maximal transcriptional activity. On the other hand, STAT1 phosphorylated on Ser727 is targeted for proteasomal degradation.,CANDF7, IMD31, ISGF3
Gene ID:	6772
UniProt:	P42224
Pathways:	JAK-STAT Signaling, RTK Signaling, Interferon-gamma Pathway, Response to Growth Hormone Stimulus, Cellular Response to Molecule of Bacterial Origin, Positive Regulation of Endopeptidase Activity, Hepatitis C, CXCR4-mediated Signaling Events

Application Details

Application Notes:	Immunohistochemistry (paraffin sections): Recommended dilution: 5 µg/mL, positive tissue: lung macrophages. Western blotting: Recommended dilution 1-2 µg/mL.
Restrictions:	For Research Use only

Handling

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Concentration:	1 mg/mL
Buffer:	Phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	**Do not freeze.**
Storage:	4 °C

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Handling

Storage Comment:	Store at 2-8°C. Do not freeze.

Publications

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Product cited in:	Kovarik, Boudny, Kocak, Lauerova, Fait, Vagundova: "Malignant melanoma associates with deficient IFN-induced STAT 1 phosphorylation." in: **International journal of molecular medicine**, Vol. 12, Issue 3, pp. 335-40, (2003) (PubMed).
	Boudný, Kocák, Lauerová, Kovarík: "Interferon inducibility of STAT 1 activation and its prognostic significance in melanoma patients." in: **Folia biologica**, Vol. 49, Issue 4, pp. 142-6, (2003) (PubMed).

Images
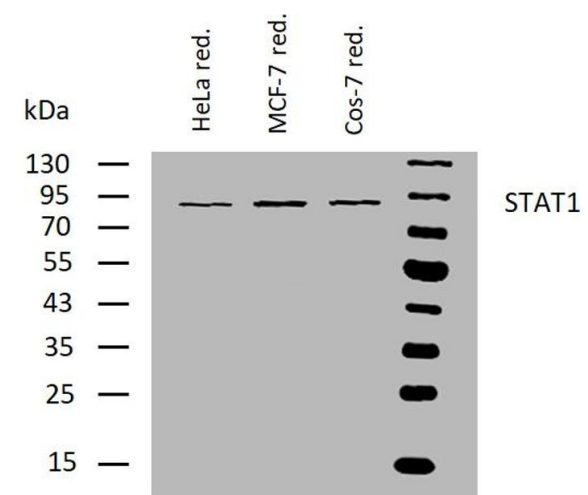
Western Blotting

Image 1. Western blotting analysis of human STAT1 using mouse monoclonal antibody SM1 on lysates of HeLa, MCF-7, and Cos-7 cell lines under reducing conditions. Nitrocellulose membrane was probed with 2 μg/mL of mouse monoclonal antibody anti-STAT1 followed by IRDye800-conjugated anti-mouse secondary antibody. STAT1 was detected at approximately 90 kDa.
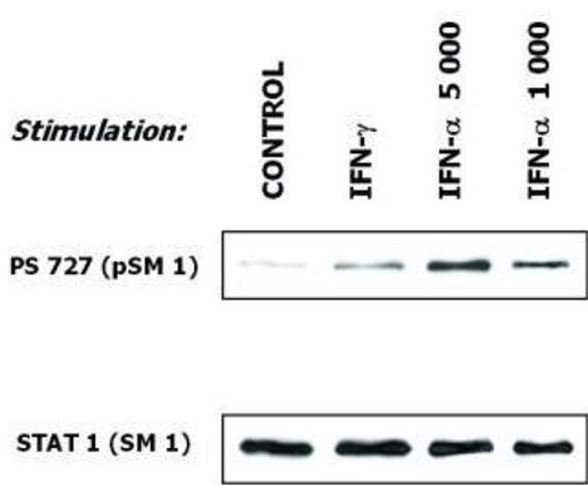
Western Blotting

Image 2. Induction of phosphorylation of STAT1 (Western Blotting) Fig. 1: Induction of phosphorylation of STAT1 at Ser727 in human malignant melanoma cells (short-term culture derived from a patient) in response to interferons. Subconfluent cells were serum-starved before exposure to activation dosages of IFN-gamma (10 ng/ml) and IFN-alpha (1000 IU/ml and 5000 IU/ml). Western blotting analysis of cell extracts shows detection of phosphorylated STAT1 (Ser727) by the antibody PSM1 (upper panel) and total STAT1 level by the antibody SM1 (lower panel).