

Human STAT1 Antibody Pair - BSA and Azide free ab256725

Recombinant RabMAb

2 Images

Overview

Product name	Human STAT1 Antibody Pair - BSA and Azide free
Assay type	ELISA set
Range	781.25 pg/ml - 50000 pg/ml
Species reactivity	Reacts with: Human
Product overview	<p>The Antibody Pair can be used to quantify Human STAT1. BSA and Azide free antibody pairs include unconjugated capture and detector antibodies suitable for sandwich ELISAs. The antibodies are provided at an approximate concentration of 1 mg/ml as measured by the protein A280 method. The recommended antibody orientation is based on internal optimization for ELISA-based assays. Antibody orientation is assay dependent and needs to be optimized for each assay type. Both capture and detector antibodies are rabbit monoclonal antibodies delivering consistent, specific, and sensitive results.</p> <p>For additional information on the performance of the antibody pair, see the equivalent SimpleStep ELISA® Kit (ab253222), which uses the same antibodies. However, due to differences in their formulation, this antibody pair cannot be used with the consumables provided with our SimpleStep ELISA Kits. Please note that the range provided for the pairs is only an estimation based on the performance of the related product using the same antibody pair. Performance of the antibody pair will depend on the specific characteristics of your assay. We guarantee the product works in sandwich ELISA, but we do not guarantee the sensitivity or dynamic range of the antibody pair in your assay.</p> <p>Download SDS here.</p>
Tested applications	Suitable for: Sandwich ELISA
Platform	Reagents

Properties

Storage instructions	Store at +4°C. Please refer to protocols.
Carrier free	Yes

Components	10 x 96 tests
Human STAT1 Capture Antibody (unconjugated)	1 x 100µg
Human STAT1 Detector Antibody (unconjugated)	1 x 100µg

Function	<p>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.</p>
Involvement in disease	<p>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.</p>
Sequence similarities	<p>Belongs to the transcription factor STAT family.</p> <p>Contains 1 SH2 domain.</p>
Post-translational modifications	<p>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.</p> <p>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.</p> <p>ISGylated.</p>
Cellular localization	<p>Cytoplasm. Nucleus. Translocated into the nucleus in response to IFN-gamma-induced tyrosine phosphorylation and dimerization.</p>

Applications

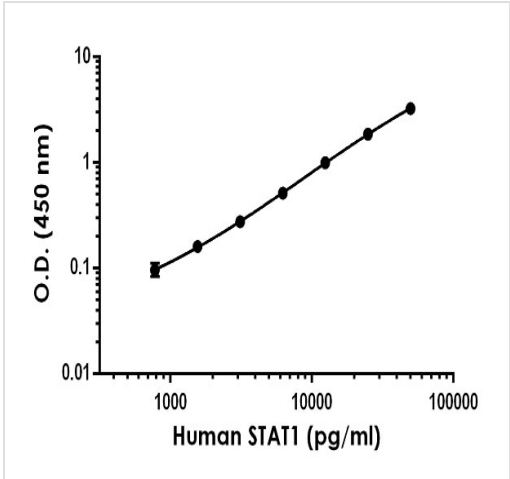
The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab256725 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
Sandwich ELISA		Use at an assay dependent concentration.

Images



Representative standard curve from corresponding SimpleStep ELISA® Kit ([ab253222](#)), which uses the same antibody pair. For additional information on the performance of pair and kit, refer to the corresponding kit datasheet. Due to differences in the formulation and format of the antibodies in this pair, they cannot be used as substitutes for the antibody components in our SimpleStep ELISA® Kits.

Sandwich ELISA - Human STAT1 Antibody Pair - BSA and Azide free (ab256725)

Powered by
recombinant antibodies

Research with confidence
Consistent and reproducible results

Long-term and scalable supply
Recombinant technology

Success from the first experiment
Confirmed specificity

Ethical standards compliant
Animal-free production

To learn more about the advantages of recombinant antibodies see [here](#).

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Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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