

Recombinant Human STAT3 protein ab43618

7 References 1 Image

Description

Product name	Recombinant Human STAT3 protein
Purity	> 70 % Affinity purified. Purified by affinity chromatography
Expression system	Baculovirus infected Sf9 cells
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human

Sequence	MSPILGYWKIKGLVQPTRLLEYLEEKYEEHLYERDEGDK WRNKKFELGLEFPNLPYYIDGDVKLTQSMAIIRYADKHN MLGGCPKERA EISMLEGAVLDIRYGVSRIAYSKDFETLKV DFLSKLPEMLKMFEDRLCHKTYLNGDHVTH PDFMLYDALDVVLYMDPMCLDAFPKLVCFK KRIEAIQIDKYLKSSKYIAPWPLQGWWQATF GGGDHPPKSDLVPRGSPEFMAQWNQLQQL DTRYLEQLHQLYSDSFPMELRQFLAPWIES QDWAYAASKE SHATLVFHNLLGEIDQQYSR FLQESNVLYQHNLRRIKQFLQSRYLEKPMEIARIVARCLW EESRLLQTAA TAAQQGGQANHPTAAVVTEK QQMLEQHLQDVRKRVQDLEQKMKVVENLQD DFDFNYKTLKSQGDMQDLNGNNQSVTRQKM QQLEQMLTALDQMRRSIVSELAGLLSAMEY VQKTLTDEELADWKRRQQIACIGGPPNICLDRLENWITSL AESQLQTRQQIKKLEELQQKVSYPKGDPIVQ HRPMLLEERIVELFRNLMKSAFVVERQPCMP MHPDRPLVIKTGVQFTTKVRLLVKFPPELNYQLKIKVCIDK DSGDVAALRGSRKFNILGTNTKVMNMEESEN NGSLSAEFKHLTLREQRCNGGRANCDASLIVTEELHLIT FETEVYHQGLKIDLETHSLPVVISNICQMPNAWASILWY NMLTNNPKNVNFFTKPPIGTWDQVAEVLWS QFSSTTKRGLSIEQLTTLAELKLLGPGVNYSGCQITWAKFC KENMAGKGFSFWVWLDNIIDLKVKYILALWNEGIMGFIS KERERAILSTKPPGTFLRRFSESSKEGGVT FTWVEKDISGKTQIQSVEPYTKQQLNNMSFAEIMGYKIM
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DATNILVSPL VYLYPDIPKE EAFGKYCRPE
 SQEHPEADPG SAAPYLKTKF ICVTPTTCSN TIDLPMSPRT
 LDSLMQFGNN GEGAEPSAGG QFESLTFDME
 LTSECATSPM

Predicted molecular weight 120 kDa
Tags GST tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab43618** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications Western blot
Form Liquid
Additional notes Recombinant full-length human STAT3 was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.

Preparation and Storage

Stability and Storage Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles.
 pH: 7.50
 Constituents: 0.87% Sodium chloride, 25% Glycerol, 0.79% Tris HCl, 0.00385% DTT, 0.00174% PMSF, 0.31% Glutathione, 0.003% EDTA

General Info

Function Signal transducer and transcription activator that mediates cellular responses to interleukins, KITLG/SCF, LEP and other growth factors. Once activated, recruits coactivators, such as NCOA1 or MED1, to the promoter region of the target gene (PubMed:17344214). May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4. Binds to the interleukin-6 (IL-6)-responsive elements identified in the promoters of various acute-phase protein genes. Activated by IL31 through IL31RA. Involved in cell cycle regulation by inducing the expression of key genes for the progression from G1 to S phase, such as CCND1 (PubMed:17344214). Mediates the effects of LEP on melanocortin production, body energy homeostasis and lactation (By similarity). May play an apoptotic role by transactivating BIRC5 expression under LEP activation (PubMed:18242580). Cytoplasmic STAT3 represses macroautophagy by inhibiting EIF2AK2/PKR activity.

Tissue specificity Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas.

Involvement in disease Hyperimmunoglobulin E recurrent infection syndrome, autosomal dominant Autoimmune disease, multisystem, infantile-onset

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

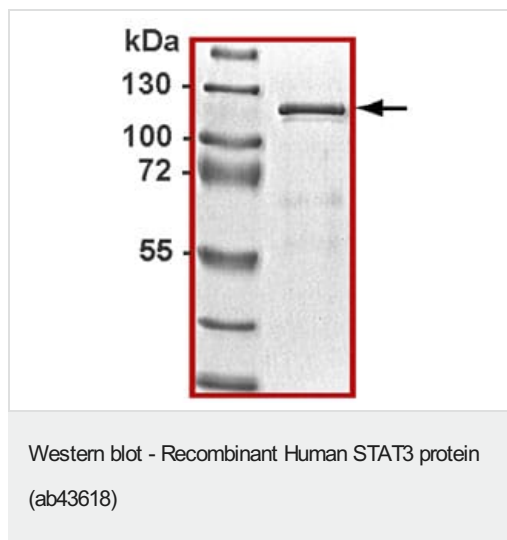
Post-translational modifications Tyrosine phosphorylated upon stimulation with EGF. Tyrosine phosphorylated in response to constitutively activated FGFR1, FGFR2, FGFR3 and FGFR4 (By similarity). Activated through tyrosine phosphorylation by BMX. Tyrosine phosphorylated in response to IL6, IL11, LIF, CNTF, KITLG/SCF, CSF1, EGF, PDGF, IFN-alpha, LEP and OSM. Activated KIT promotes phosphorylation on tyrosine residues and subsequent translocation to the nucleus.

Phosphorylated on serine upon DNA damage, probably by ATM or ATR. Serine phosphorylation is important for the formation of stable DNA-binding STAT3 homodimers and maximal transcriptional activity. ARL2BP may participate in keeping the phosphorylated state of STAT3 within the nucleus. Upon LPS challenge, phosphorylated within the nucleus by IRAK1. Upon erythropoietin treatment, phosphorylated on Ser-727 by RPS6KA5. Phosphorylation at Tyr-705 by PTK6 or FER leads to an increase of its transcriptional activity. Dephosphorylation on tyrosine residues by PTPN2 negatively regulates IL6/interleukin-6 signaling.

Cellular localization

Cytoplasm. Nucleus. Shuttles between the nucleus and the cytoplasm. Translocated into the nucleus upon tyrosine phosphorylation and dimerization, in response to signaling by activated FGFR1, FGFR2, FGFR3 or FGFR4. Constitutive nuclear presence is independent of tyrosine phosphorylation. Predominantly present in the cytoplasm without stimuli. Upon leukemia inhibitory factor (LIF) stimulation, accumulates in the nucleus. The complex composed of BART and ARL2 plays an important role in the nuclear translocation and retention of STAT3. Identified in a complex with LYN and PAG1.

Images



Demonstration of protein purity (>90%) by western blot.

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