

Product datasheet

Recombinant Human STAT3 protein ab43618

4 References 1 Image

Description

Product name	Recombinant Human STAT3 protein
Expression system	Baculovirus infected Sf9 cells
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human

Sequence

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MSPILGYWKI KGLVQPTRL L LEYLEEKYEE HLYERDEGDK
WRNKKFELGL EFPNLPYYID GDVKLTQSMA IIRYADKHN
MLGGCPKERA EISMLEGAVL DIRYGVSRIA YSKDFETLKV
DFLSKLP EML KMFEDRLCHK TYLNGDHVTH
PDFMLYDALD VVLYMDPMCL DAFPKLVCFK
KRIEAIQID KYLKSSKYIA WPLQGWQATF
GGGDHPPKSD LVPRGSPEF MAQWNQLQQL
DTRYLEQLHQ LYSDSFP MEL RQFLAPWIES
QDWAYAASKE SHATLVFHNL LGEIDQQYSR
FLQESNVLYQ HNLRRIKQFL QSRYLEKPME IARVARCLW
EESRLLQTAA TAAQQGGQAN HPTAAVVTEK
QQMLEQHLQD VRKRVQDLEQ KMKVVENLQD
DFDFNYKTLK SQGDMQDLNG NNQSVTRQKM
QQLEQMLTAL DQMRRSIVSE LAGLLSAMEY
VQKTLTDEEL ADWKRRQQIA CIGGPPNICL DRLENWITSL
AESQLQTRQQ IKKLEELQQK VSYKGDPIVQ
HRPML EERIV ELFRNLMKSA FVVERQPCMP
MHPDRPLVIK TGVQFTTKVR LLVKFPELNY QLKIKVCIDK
DSGDVAALRG SRKFNILGTN TKVMNMEESN
NGLSAEFKH LTLREQRCGN GGRANCDASL MTEELHLIT
FETEVYHQGL KIDLETHSLP VVVISNICQM PNAWASILWY
NMLTNNPKNV NFFTKPIGT WDQVAEVLSW
QFSSTTKRGL SIEQLTTLAE KLLGPGVNYS GCQITWAKFC
KENMAGKGF S FWWWLDNIID LVKKYLALW NEGYIMGFIS
KERERAILST KPPGTFLRF SESSKEGGVT
FTWVEKDISG KTQIQSVEPY TKQQLNMSF AEIIMGYKIM
DATNILVSPL VYLYPDIPKE EAFGKYCRPE
SQEHPEADPG SAAPYLKTKF ICVTPPTCSN TIDLPMSPRT
LDSLMQFGNN GEGAEPSAGG QFESLTFDME

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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
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General Info

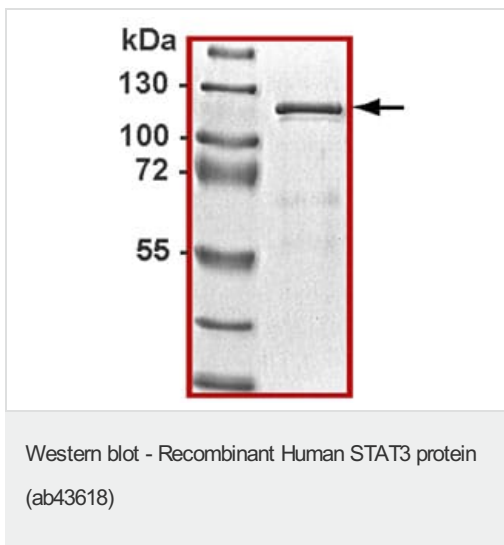
Function	Signal transducer and transcription activator that mediates cellular responses to interleukins, KITLG/SCF, LEP and other growth factors. Once activated, recruits coactivators, such as NCOA1 or MED1, to the promoter region of the target gene (PubMed:17344214). May mediate cellular responses to 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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