

STAT2 Protein, Human, Recombinant (His)

General Information

Protein Construction:	A DNA sequence encoding the Human STAT2 (uniprot# P52630) (Val138-Gln702) was expressed with a polyhistidine tag at the N-terminus
Species:	Human
Expression Host:	E. coli
Accession:	P52630
AA Sequence:	VESQQHEIESRILDLRAMMEKLVKSISQLKDQQDVFVCFRYKIQAKGKTPSLDPHQTKEQKILQETLNELDKRRK EVL DASKALLGRLTLLIPELLPKLEEWKAQQKACIRAPIDHGLEQLETWFTAGAKLLFHLRQLLKEKGLSCLV SYQDDPLTKGVDLRNAQVTELLQRLLRHAFVQVETQPCMPQTPHRPLIKTGSKFTVRTRLLVRLQEGNESLTV VSIDRNPPLQGFQFRKFNILTSNQKTLTPEKGQSQGLIWDFGYLTLVEQQRSGGSGKGSNKGPLGVTEELHIISFT VKYTYQGLKQELKTDLTPVVIISNMNQLSIAWASVLWFNLLSPNLQNPQFFSNPPKAPWSLLGPALSWQFSS YVGRGLNSDQLSMLRNKLFQNCRTEDPLLSWADFTKRESPPGKLPFWTWLDKILELVHDHLKDLWNDGRI MGFVSRSQERRLLKKTMSGTFLLRFSESEGGITCSWVEHQDDDKVLIYSVQPYTKEVLQSLPLTEIIRHYQLL EENIPENPLRFLYPRIPRDEAFGCYYQEKVNLQERRKYLKHLIVVSNRQ

QC Testing

Biological Activity:	Not verified.
Purity:	>85% as determined by SDS-PAGE.
Formulation:	Supplied as a 0.2 µm filtered solution of 50 mM HEPES pH 7.5, 150 mM NaCl, 1 mM DTT, 5% glycerol

Preparation and Storage

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

Signal transducer and activator of transcription that mediates signaling by type I IFNs (IFN-alpha and IFN-beta). Following type I IFN 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.

Reference

Bluysen HA, Levy DE. Stat2 is a transcriptional activator that requires sequence-specific contacts provided by stat1 and p48 for stable interaction with DNA. J Biol Chem. 1997 Feb 14;272(7):4600-5.

Hambleton S, et al. STAT2 deficiency and susceptibility to viral illness in humans. Proc Natl Acad Sci U S A. 2013 Feb 19;110(8):3053-8.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481