Recombinant Human STAT1 Protein (His &GSTTag)

Catalog Number: PKSH030783

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

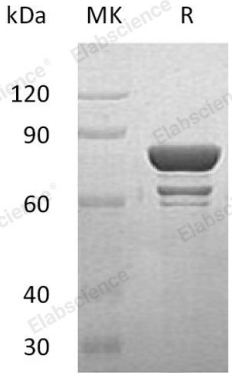
Description

Species	Human
Source	Baculovirus-Insect Cells-derived Human STAT1 protein Met 1-Val 712, with an N-terminal His & GST
Calculated MW	111 kDa
Observed MW	105 kDa
Accession	P42224-2
Bio-activity	Not validated for activity

Properties

Purity	> 92 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



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Background

STAT1 is a member of the STAT protein family. In response to cytokines and growth factors; STAT family members are phosphorylated by the receptor associated kinases; and then form homo- or heterodimers that translocate to the cell nucleus where they act as transcription activators. STAT1 can be activated by various ligands; including interferon-alpha; interferon-gamma; EGF; PDGF and IL6. It is a signal transducer and transcription activator that mediates cellular responses to interferons (IFNs); cytokine KITLG/SCF and other cytokines and growth factors. 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. STAT1 becomes activated in response to KITLG/SCF and KIT signaling and may mediate cellular responses to activated FGFR1; FGFR2; FGFR3 and FGFR4. Defects in STAT1 can cause STAT1 deficiency complete and familial candidiasis type 7.

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