Recombinant Protein Technical Manual

Recombinant Human STAT1 Protein (His &GST Tag)

RPES1911

Product Data:

Product SKU: RPES1911

Size: 50µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: P42224-2

Protein Information:

Molecular Mass: 111 kDa

AP Molecular Mass: 105 kDa

Tag: N-His-GST

Bio-activity:

Purity: > 92 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg of the protein as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. 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

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Signal Transducer and Activator of Transcription 1-Alpha/Beta; Transcription Factor ISGF-3 Components p91/p84; STAT1; CANDF7;IMD31A;IMD31B;IMD31C;ISGF-3;STAT91

Immunogen Information:

Sequence: Met 1-Val 712

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.