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#9939

Stat Antibody Sampler Kit

1 Kit (4 x 20 microliters)

For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Stat1 Antibody	9172	20 µl	84, 91 kDa	Rabbit
Stat3 (79D7) Rabbit mAb	4904	20 µl	79, 86 kDa	Rabbit IgG
Stat5 (D2O6Y) Rabbit mAb	94205	20 µl	90 kDa	Rabbit IgG
Stat6 (D3H4) Rabbit mAb	5397	20 µl	110 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Stat Antibody Sampler Kit provides an economical means to examine multiple Stat proteins: Stat1, Stat3, Stat5 and Stat6. The kit contains enough primary and secondary antibodies to perform two Western blot experiments.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Background

Janus kinases (Jaks) and signal transducers and activators of transcription (Stats) are utilized by receptors for a wide variety of ligands including cytokines, hormones, growth factors, and neurotransmitters. Jaks, activated via autophosphorylation following ligand-induced receptor aggregation, phosphorylate tyrosine residues on associated receptors, Stat molecules, and other downstream signaling proteins (1,2). The phosphorylation of Stat proteins at conserved tyrosine residues activates SH2-mediated dimerization followed rapidly by nuclear translocation. Stat dimers bind to interferon response element (IRE) and gamma interferon-activated sequence (GAS) DNA elements, resulting in the transcriptional regulation of downstream genes (1,2). The remarkable range and specificity of responses regulated by the Stats is determined in part by the tissue-specific expression of different cytokine receptors, Jaks and Stats (2,3), and by the combinatorial coupling of various Stat members to different receptors. Serine phosphorylation in the carboxy-terminal transcriptional activation domain has been shown to regulate the function of Stat1, Stat2, Stat3, Stat4, and Stat5 (1). Phosphorylation of Stat3 at Ser727 via MAPK or mTOR pathways is required for optimal transcriptional activation in response to growth factors and cytokines including IFN-gamma and ciliary neurotrophic factor (CNTF) (4,5). Jak/Stat pathways also play important roles in oncogenesis, tumor progression, angiogenesis, cell motility, immune responses, and stem cell differentiation (6-11).

Background References

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