

#9914 Store at -20°C

Phospho-Stat Antibody Sampler Kit

1 Kit (6 x 20 microliters)



Cell Signaling
TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-Stat1 (Tyr701) (D4A7) Rabbit mAb	7649	20 µl	84, 91 kDa	Rabbit IgG
Phospho-Stat2 (Tyr690) Antibody	4441	20 µl	113 kDa	Rabbit
Phospho-Stat3 (Tyr705) (D3A7) XP® Rabbit mAb	9145	20 µl	79, 86 kDa	Rabbit IgG
Phospho-Stat3 (Ser727) Antibody	9134	20 µl	86 kDa	Rabbit
Phospho-Stat5 (Tyr694) (D47E7) XP® Rabbit mAb	4322	20 µl	90 kDa	Rabbit IgG
Phospho-Stat6 (Tyr641) Antibody	9361	20 µl	110 kDa	Rabbit
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 Phospho-Stat Pathway Sampler Kit provides an economical means to evaluate the activation status of Stat molecules, including the phosphorylation of Stat1 at Tyr701, Stat2 at Tyr690, Stat3 at Tyr705/Ser727, Stat5 at Tyr694 and Stat6 at Tyr641. The kit includes enough primary and secondary antibody 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

Jaks (Janus Kinases) and Stats (Signal Transducers and Activators of Transcription) 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 IRE (interferon response element) and GAS (gamma interferon-activated sequence) 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, -2, -3, -4 and -5 (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 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

1. Darnell Jr., J. et al. (1994) *Science* 264, 1415-1421.
2. Leonard, W.J. and O'Shea, J.J. (1998) *Annu. Rev. Immunol.* 16, 293-322.
3. Caldenhoven, E. et al. (1996) *J. Biol. Chem.* 271, 13221-13227.
4. Wen, Z. et al. (1995) *Cell* 82, 241-250.
5. Yokogami, K. et al. (2000) *Curr. Biol.* 10, 47-50.
6. Lim, C.P. and Cao, X. (1999) *J. Biol. Chem.* 274, 31055-31061.
7. Bromberg, J. F. et al. (1999) *Cell* 98, 295-303.
8. Su, L. et al. (1999) *J. Biol. Chem.* 274, 31770-31774.
9. Dentelli, P. et al. (1999) *J. Immunol.* 163, 2151-2159.
10. Cattaneo, E. et al. (1999) *Trends Neurosci.* 22, 365-369.
11. Frank, D.A. (1999) *Mol. Med.* 5, 432-456.

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

U.S. Patent No. 7,429,487, foreign equivalents, and child patents deriving therefrom.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.