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Store at -20C
#5267

Phospho-Stat4 (Tyr693) Antibody

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, ChIP	H	Endogenous	81	Rabbit	#Q14765	6775

Product Usage Information

For optimal ChIP results, use 20 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ cells) per IP.

This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Chromatin IP	1:25

Storage

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

Specificity/Sensitivity

Phospho-Stat4 (Tyr693) Antibody detects endogenous levels of Stat4 only when phosphorylated at Tyr693.

Species predicted to react based on 100% sequence homology

Mouse, Rat

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr693 of human Stat4 protein. Antibodies were purified by protein A and peptide affinity chromatography.

Background

The Jak-Stat signaling pathway is utilized by a large number of cytokines, growth factors, and hormones (1). Receptor-mediated tyrosine phosphorylation of Jak family members triggers phosphorylation of Stat proteins, resulting in their nuclear translocation, binding to specific DNA elements, and subsequent activation of transcription. 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, as well as by the combinatorial coupling of various Stat members to different receptors (2). Stat4 is predominantly expressed in the spleen, thymus, and testis and has been most extensively investigated as the mediator of IL-12 responses (3-8). Activation of Stat4 is associated with phosphorylation at Tyr693 (9).

Stat4 is activated in response to IL-2 in natural killer (NK) cells, but not in T-cells (10).

Background References

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- Leonard, W.J. and O'Shea, J.J. (1998) *Annu. Rev. Immunol.* 16, 293-322.
- Zhong, Z. et al. (1994) *Proc. Natl. Acad. Sci. USA* 91, 4806-4810.
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- Jacobson, N.G. et al. (1995) *J. Exp. Med.* 181, 1755-1762.
- Bacon, C.M. et al. (1995) *Proc. Natl. Acad. Sci. USA* 92, 7307-7311.
- Thierfelder, W.E. et al. (1996) *Nature* 382, 171-174.
- Kaplan, M.H. et al. (1996) *Nature* 382, 174-177.
- Visconti, R. et al. (2000) *Blood* 96, 1844-52.
- Wang, K.S. et al. (1999) *J Immunol* 162, 299-304.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **ChIP:** Chromatin IP

Cross-Reactivity Key

H: Human

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