

Phospho-Stat1 (Tyr701) Blocking Peptide



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Description: This peptide is used to block Phospho-Stat1 (Tyr701) (58D6) Rabbit mAb #9167 reactivity.

Background: The Stat1 transcription factor is activated in response to a large number of ligands (1) and is essential for responsiveness to IFN- α and IFN- γ (2,3). Phosphorylation of Stat1 at Tyr701 induces Stat1 dimerization, nuclear translocation, and DNA binding (4). Stat1 protein exists as a pair of isoforms, Stat1 α (91 kDa) and the splice variant Stat1 β (84 kDa). In most cells, both isoforms are activated by IFN- α , but only Stat1 α is activated by IFN- γ . The inappropriate activation of Stat1 occurs in many tumors (5). In addition to tyrosine phosphorylation, Stat1 is also phosphorylated at Ser727 through a p38 mitogen-activated protein kinase (MAPK)-dependent pathway in response to IFN- α and other cellular stresses (6). Serine phosphorylation may be required for the maximal induction of Stat1-mediated gene activation.

Quality Control: The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks Phospho-Stat1 (Tyr701) (58D6) Rabbit mAb #9167 signal in peptide dot blot.

Directions for Use: Use as a blocking reagent to evaluate the specificity of antibody reactivity in peptide dot blot protocols. Recommended antibody dilutions can be found on the product data sheet.

Background References:

- (1) Heim, M.H. (1999) *J. Recept. Signal. Transduct. Res.* 19, 75-120.
- (2) Durbin, J.E. et al. (1996) *Cell* 84, 443-450.
- (3) Meraz, M.A. et al. (1996) *Cell* 84, 431-442.
- (4) Ihle, J.N. et al. (1994) *Trends Biochem. Sci.* 19, 222-227.
- (5) Frank, D.A. (1999) *Mol. Med.* 5, 432-456.
- (6) Wen, Z. et al. (1995) *Cell* 82, 241-250.

Entrez Gene ID #6772

UniProt ID #P42224

Storage: Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA and 5% glycerol. 1% DMSO Store at -20°C.

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com/companion for a complete listing of recommended companion products.