

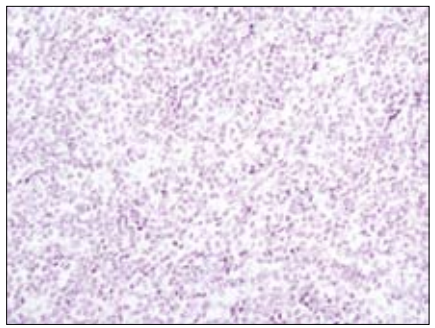
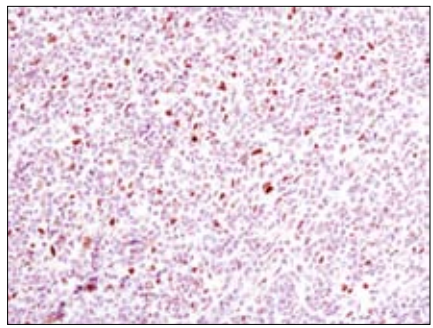
# Phospho-Stat1 (Tyr701) Blocking Peptide

✓ 100 µg (100 sections)

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This product is for *in vitro* research use only and is not intended for use in humans or animals.



Immunohistochemical analysis of paraffin-embedded Non-Hodgkin's lymphoma using Phospho-Stat1 (Tyr701) (58D6) Rabbit mAb #9167 in the presence of control peptide (left) or Phospho-Stat1 (Tyr701) Blocking Peptide (right).

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

**Companion Products:**  
Phospho-Stat1 (Tyr701) (58D6) Rabbit mAb #9167  
SignalSlide™ Phospho-Stat3 (Tyr705) IHC Controls #8105

**Background:** Stat1, while activated in response to a large number of ligands (1), appears to be 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 has two isoforms, Stat1α (91 kDa) and the splice variant Stat1β (84 kDa). In most cells, both isoforms are activated by IFN-α, but only Stat1α is activated by IFN-γ. Stat1 has been found to be inappropriately activated in many tumors (5). In addition to tyrosine phosphorylation, Stat1 is phosphorylated through a p38 mitogen-activated protein kinase (MAPK)-dependent pathway at Ser727 in response to IFN-α and other cellular stresses (6). Serine phosphorylation may be required for the maximal induction of Stat1-mediated gene activation.

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

**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 immunohistochemistry.

**Directions for Use:** For immunohistochemistry, add twice the volume of peptide as volume of antibody used in 100 µl total volume. Incubate for a minimum of 30 minutes prior to adding the entire volume to the slide. Recommended antibody dilutions can be found on the product data sheet.

**Applications:** Use as a blocking reagent to evaluate the specificity of antibody reactivity in immunohistochemistry protocols.

- 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.