

## 12-4009: Phospho-Stat3 (Tyr705) (Clone: B12) rabbit mAb

|                                |   |
|--------------------------------|---|
| <b>Clonality :</b>             | Monoclonal  |
| <b>Clone Name :</b>            | Stat3Y705-B12   |
| <b>Application :</b>           | FACS  |
| <b>Reactivity :</b>            | Human, Mouse  |
| <b>Conjugate :</b>             | Unconjugated  |
| <b>Format :</b>                | Purified  |
| <b>Alternative Name :</b>      | Signal transducer and activator of transcription 3, STAT3, Acute-phase response factor, APRF    |
| <b>Isotype :</b>               | Rabbit IgG1k  |
| <b>Immunogen Information :</b> | A synthetic phospho-peptide corresponding to residues surrounding Tyr705 of human phospho Stat3 |

### Description

Considered an oncogene, Stat3 is constitutively active in 70% of solid and hematological tumors, including leukemia, lymphoma, and multiple myeloma. The IL-6-Jak-Stat3 pathway can mediate cancer inflammation through both mutation of key regulatory genes and environmental stressors. Attempts at directly targeting Stat3 in cancer therapy have focused on the development of phosphopeptides and mimics that interact with the phospho-tyrosine-SH2 domain of Stat3 in an effort to destabilize active dimers and prevent DNA binding. Stat3 is primarily phosphorylated at Tyr705 upon activation of the Jak-Stat3 pathway. Secondary phosphorylation at Tyr727 at the C-terminus is thought to occur after Tyr705 phosphorylation. However, studies in melanoma have shown constitutive phosphorylation at Tyr727 that promotes survival of these cancerous cells.

### Product Info

|                            |   |
|----------------------------|---|
| <b>Amount :</b>            | 20 $\mu$ l / 200 $\mu$ l                                |
| <b>Content :</b>           | 1X PBS, 0.02% NaN <sub>3</sub> , 50% Glycerol, 0.1% BSA |
| <b>Storage condition :</b> | Store at -20°C. Avoid repeated freeze and thaw cycles.  |

### Application Note

1  $\mu$ g/mL - 0.001  $\mu$ g/mL. It is recommended that the reagent be titrated for optimal performance for each application. See product image legends for additional information.(0.5mg/ml)

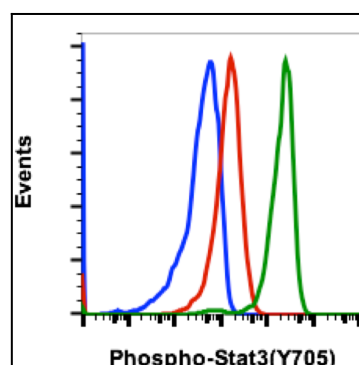


Fig-1: Flow cytometric analysis of Jurkat cells secondary antibody only negative control (blue) or untreated (red) or treated with IFN $\alpha$  IL-4 and pervanadate (green) using Phospho-Stat3 (Tyr705) antibody Stat3Y705-B12 (5 ng/mL).

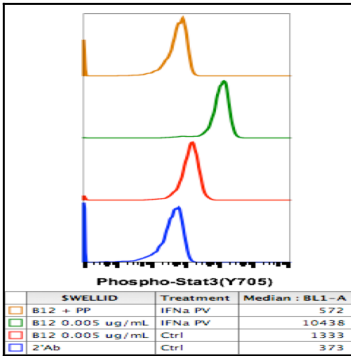


Fig 2 : Flow cytometric analysis of Jurkat cells secondary antibody only negative control (blue) untreated (red) treated with IFNa IL-4 and pervanadate (green) treated + blocked with phospho-peptide (brown) using Phospho-Stat3 (Tyr705) antibody Stat3Y705-B12 (5 ng/mL).

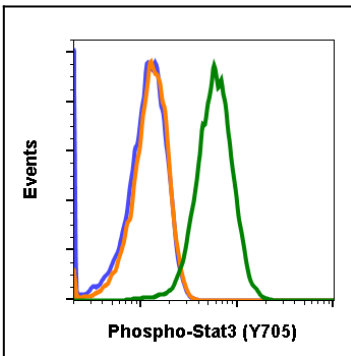


Fig-3: Stat3Y705-B12 recognizes basal phosphorylation levels in mouse cells. Flow cytometric analysis of L929 cells secondary antibody only (blue) or 0.1 µg/mL of isotype control (orange) or of Phospho-Stat3 (Tyr705) antibody Stat3Y705-B12 (green)

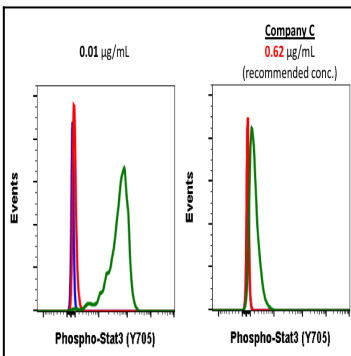


Fig-4: Flow cytometric analysis of Jurkat cells secondary antibody only negative control (blue) or untreated (red) or treated with IFNa + IL-4 + pervanadate (green) using Phospho-Stat3 (Y705) antibody Stat3Y705-B12 or Company C antibody at 0.62 µg/mL (manufacturer's recommended concentration).