**Product Information**

Material Number: 558249
Alternate Name: Signal transducer and activator of transcription 4; SLEB11
Size: 50 Tests
Vol. per Test: 20 µl
Clone: 38/p-Stat4
Immunogen: Phosphorylated Human Stat4 (pY693)
Isotype: Mouse IgG2b, κ
Reactivity: QC Testing: Human
Storage Buffer: Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide.

**Description**

The Stat proteins function both as cytoplasmic signal transducers and as activators of transcription. Seven mammalian Stat proteins have been identified: Stat1-4, Stat5a, 5b, and Stat6. Stat4 has been shown to play an important role in development of T helper cells, specifically the Th1 subset. Stat4 is activated by IL-12 and by type 1 interferons. Knockout mice supported the role that Stat4 plays in IL-12 signaling because lymphocytes from Stat 4-/- mice could neither differentiate into Th1 cells nor produce IFN-γ in response to treatment with IL-12. IFN-γ plays an important role in host defense. A key component in the activation of Stat4 is the phosphorylation on tyrosine and serine residues in response to IL-12 stimulation. IL-12 stimulation leads to the phosphorylation of Stat4 on tyrosine 693 and serine 721. Transcriptional activity of Stat4 has been shown to be significantly reduced when residues Y693 and S721 are mutated.

Clone 38/p-Stat4 has been confirmed to recognize mouse phospho-Stat4 with western blot application using Purified Mouse Anti-Stat4 (pY693), Cat. Nos. 612739 & 612738.

**Preparation and Storage**

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

**Application Notes**

Application

| Intracellular staining (flow cytometry) | Routinely Tested |

**Suggested Companion Products**

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tbody>
<tr>
<td>558049</td>
<td>Lyse/Fix Buffer 5X</td>
<td>250 mL</td>
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<tr>
<td>558050</td>
<td>Perm Buffer III</td>
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<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
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**Product Notices**

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use \(1 \times 10^6\) cells in a 100-µl experimental sample (a test).
3. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.

**References**
