#8204 PhosphoPlus® Stat3 (Tyr705) Antibody Duet

**For Research Use Only. Not For Use In Diagnostic Procedures.**

<table>
<thead>
<tr>
<th>Products Included</th>
<th>Product #</th>
<th>Quantity</th>
<th>Mol. Wt.</th>
<th>Isotype/Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phospho-Stat3 (Y705) (D3A7) XP® Rabbit mAb</td>
<td>9145</td>
<td>100 µl</td>
<td>79, 86 kDa</td>
<td>Rabbit IgG</td>
</tr>
<tr>
<td>Stat3 (D3Z2G) Rabbit mAb</td>
<td>12640</td>
<td>100 µl</td>
<td>79, 86 kDa</td>
<td>Rabbit IgG</td>
</tr>
</tbody>
</table>

See www.cellsignal.com for individual component applications, species cross-reactivity, dilutions, and additional application protocols.

**Description:** PhosphoPlus® Duets from Cell Signaling Technology (CST) provide a means to assess protein activation status. Each Duet contains an activation-state and total protein antibody to your target of interest. These antibodies have been selected from CST's product offering based upon superior performance in specified applications.

**Background:** The Stat3 transcription factor is an important signaling molecule for many cytokines and growth factor receptors and is required for murine fetal development. Research studies have shown that Stat3 is constitutively activated in a number of human tumors and possesses oncogenic potential. Stat3 is activated by phosphorylation at Tyr705, which induces dimerization, nuclear translocation, and DNA binding. Transcriptional activation seems to be regulated by phosphorylation at Ser727 through the MAPK or mTOR pathways. Stat3 isoform expression appears to reflect biological function as the relative expression levels of Stat3α (86 kDa) and Stat3β (79 kDa) depend on cell type, ligand exposure, or cell maturation stage. It is notable that Stat3β lacks the serine phosphorylation site within the carboxy-terminal transcriptional activation domain.

**Specificity/Sensitivity:** Stat3 (D3Z2G) Rabbit mAb recognizes endogenous levels of total Stat3 protein. Species cross-reactivity for IF-IC and F is human only. Phospho-Stat3 (Tyr705) (D3A7) XP® Rabbit mAb detects endogenous levels of Stat3 only when phosphorylated at tyrosine 705. This antibody does not cross-react with phospho-EGFR or the corresponding phospho-tyrosines of other Stat proteins.

**Source/Purification:** Monoclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly700 of human Stat3 protein and a phosphopeptide corresponding to residues surrounding Tyr705 of mouse Stat3 protein.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

**Background References:**

**U.S. Patent No. 7,429,487, foreign equivalents, and child patents deriving therefrom.**

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