### Stat3 Antibody

**Applications:** WB, IP, IHC-P, ChIP  
**Reactivity:** H M R Mk  
**Sensitivity:** Endogenous  
**MW (kDa):** 79, 86  
**Source:** Rabbit  
**UniProt ID:** #P40763  
**Entrez-Gene Id:** 6774

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<table>
<thead>
<tr>
<th>Application</th>
<th>Dilution</th>
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</thead>
<tbody>
<tr>
<td>Western Blotting</td>
<td>1:1000</td>
</tr>
<tr>
<td>Immunoprecipitation</td>
<td>1:100</td>
</tr>
<tr>
<td>Immunohistochemistry (Paraffin)</td>
<td>1:200</td>
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<tr>
<td>Chromatin IP</td>
<td>1:50</td>
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</tbody>
</table>

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

#### Specificity / Sensitivity
Stat3 Antibody detects endogenous levels of total Stat3 protein.

#### Species predicted to react based on 100% sequence homology:
Bovine

#### Source / Purification
Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the sequence of mouse Stat3. Antibodies are purified by protein A and peptide affinity chromatography.

#### Background
The Stat3 transcription factor is an important signaling molecule for many cytokines and growth factor receptors (1) and is required for murine fetal development (2). Research studies have shown that Stat3 is constitutively activated in a number of human tumors (3,4) and possesses oncogenic potential (5) and anti-apoptotic activities (3). Stat3 is activated by phosphorylation at Tyr705, which induces dimerization, nuclear translocation, and DNA binding (6,7). Transcriptional activation seems to be regulated by phosphorylation at Ser727 through the MAPK or mTOR pathways (8,9). 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 (10). It is notable that Stat3β lacks the serine phosphorylation site within the carboxy-terminal transcriptional activation domain (8).

#### Background References

#### Species Reactivity
Species reactivity is determined by testing in at least one approved application (e.g., western blot).

#### Western Blot Buffer
**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

#### Applications Key
- **WB:** Western Blotting  
- **IP:** Immunoprecipitation  
- **IHC-P:** Immunohistochemistry (Paraffin)  
- **ChIP:** Chromatin IP

#### Cross-Reactivity Key
- **Store at -20°C**

**#9132**

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