

**Cat. No:** ABP-0070  
**Conjugate:** Unconjugated  
**Size:** 100 ug  
**Clone:** Poly  
**Concentration:** 1mg/ml  
**Host:** Rb  
**Isotype:** IgG  
**Reactivity:** Hu, Ms, Rt  
**Applications:** WB: 1:1000, IHC(P): 1:50, IF: 1:50, IP: 1:10, ICC: 1:50  
**Molecular Weight:** 88 kDa

**Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr705 of mouse Stat3. Antibodies are purified by protein A and peptide affinity chromatography.

**Background:** Stat3 is a key signaling molecule for many cytokines and growth-factor receptors (1) and is required for murine fetal development (2). Additionally, 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 via the MAPK or mTOR pathway (8,9). Stat3 isoform expression appears to reflect biological function: the relative expression levels of Stat3 $\alpha$  (86 kDa) and Stat3 $\beta$  (79 kDa) depend on cell type, ligand exposure or maturation stage of the cells (10). It is notable that Stat3 $\beta$  lacks the serine phosphorylation site within the carboxy-terminal transcriptional activation domain (8). Phospho-Stat3 (Tyr705) Antibody detects endogenous levels of Stat3 only when phosphorylated at Tyr705. The antibody does not cross-react with other Stat proteins when phosphorylated on the corresponding tyrosine residue, but has been shown to cross-react with Phospho-EGFR.

**Form:** liquid  
**Buffer:** Supplied in PBS with 0.02% sodium azide, 50% glycerol, pH7.3.  
**Storage:** Store at -20°C. Do not aliquot the antibody.

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