



Phospho-STAT3 (S727) Antibody

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| Product Code | CSB-RA022812A727phHU |
| Abbreviation | Signal transducer and activator of transcription 3 |
| Storage | Upon receipt, store at -20°C or -80°C. Avoid repeated freeze. |
| Uniprot No. | P40763 |
| Immunogen | A synthesized peptide derived from Human Phospho-STAT3 (S727) |
| Species Reactivity | Human |
| Tested Applications | ELISA, WB, IHC, IP; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IP:1:200-1:1000 |
| Relevance | <p>Signal transducer and transcription activator that mediates cellular responses to interleukins, KITLG/SCF, LEP and other growth factors (PubMed:10688651, PubMed:12359225, PubMed:12873986, PubMed:15194700, PubMed:17344214, PubMed:18242580, PubMed:23084476). Once activated, recruits coactivators, such as NCOA1 or MED1, to the promoter region of the target gene (PubMed:17344214). May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4 (PubMed:12873986). Binds to the interleukin-6 (IL-6)-responsive elements identified in the promoters of various acute-phase protein genes (PubMed:12359225). Activated by IL31 through IL31RA (PubMed:15194700). Acts as a regulator of inflammatory response by regulating differentiation of naive CD4(+) T-cells into T-helper Th17 or regulatory T-cells (Treg): deacetylation and oxidation of lysine residues by LOXL3, leads to disrupt STAT3 dimerization and inhibit its transcription activity (PubMed:28065600). Involved in cell cycle regulation by inducing the expression of key genes for the progression from G1 to S phase, such as CCND1 (PubMed:17344214). Mediates the effects of LEP on melanocortin production, body energy homeostasis and lactation (By similarity). May play an apoptotic role by transactivating BIRC5 expression under LEP activation (PubMed:18242580). Cytoplasmic STAT3 represses macroautophagy by inhibiting EIF2AK2/PKR activity (PubMed:23084476). Plays a crucial role in basal beta cell functions, such as regulation of insulin secretion (By similarity).</p> |
| Form | Liquid |
| Conjugate | Non-conjugated |
| Storage Buffer | Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. |
| Purification Method | Affinity-chromatography |
| Isotype | Rabbit IgG |
| Clonality | Monoclonal |
| Alias | Signal transducer and activator of transcription 3, Acute-phase response factor, STAT3 |
| Immunogen Species | Homo sapiens (Human) |

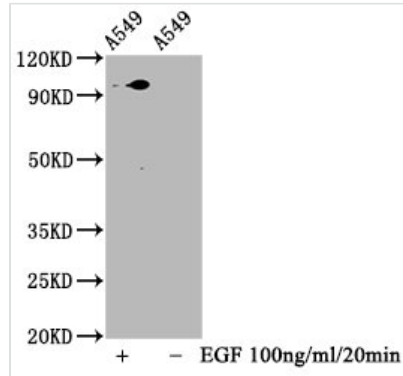


Research Area Signal Transduction

Gene Names STAT3

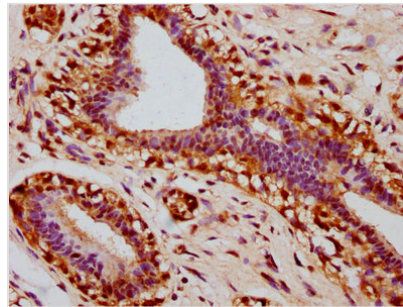
Accession NO. 2A9

Image

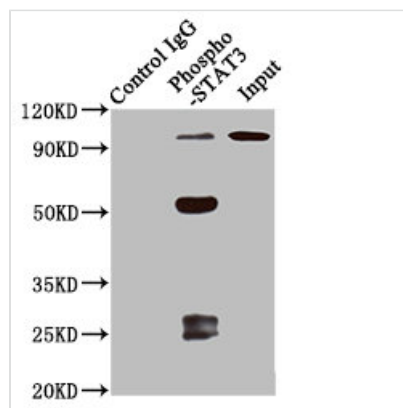


Western Blot

Positive WB detected in A549 whole cell lysate (treated with EGF or not)
 All lanes Phospho-STAT3 antibody at 1.88µg/ml
 Secondary
 Goat polyclonal to rabbit IgG at 1/50000 dilution
 Predicted band size: 98 KDa
 Observed band size: 98 KDa



IHC image of CSB-RA022812A727phHU diluted at 1:100 and staining in paraffin-embedded human breast cancer performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



Immunoprecipitating Phospho-STAT3 in 293

whole cell lysate treated with Calyculin A
 Lane 1: Rabbit control IgG(1µg) instead of CSB-RA022812A727phHU in 293 whole cell lysate treated with Calyculin A. For western blotting, a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000)
 Lane 2: CSB-RA022812A727phHU(3µg)+ 293 whole cell lysate treated with Calyculin A(1mg)
 Lane 3: 293 whole cell lysate treated with Calyculin A (20µg)

Description

The phospho-STAT3 (S727) recombinant monoclonal antibody is a highly specific antibody against the pS727-STAT3 from human sources. This phospho-STAT3 (S727) antibody was expressed by transfecting the human phospho-STAT3 (S727) monoclonal antibody gene-vector clones into the cell line for in vitro production and subsequent purification from the tissue culture supernatant (TCS) through affinity-chromatography. Its isotype matches with the rabbit IgG. This phospho-STAT3 (S727) antibody can be used in ELISA, WB, IHC, and IP applications.

STAT3 has a role in a variety of biological processes, including cancer and



immunology. When JAKs associated with cytokine-stimulated receptors phosphorylate STAT3 monomers at tyrosine 705 (pY705), cytoplasmic STAT3 monomers dimerize and translocate to the nucleus, where the homodimers promote target gene transcription. Members of the MAPK and c-Jun N-terminal kinase families can also phosphorylate STAT3 at serine 727 (pS727). The role of pS727 has been shown to improve STAT3's transcriptional activity, and later pS727 was shown to reduce the duration of STAT3's transcriptional activity for the *socs3* gene by promoting pY705 dephosphorylation.