

Anti-Phospho-STAT3 (Y705) Rabbit Monoclonal Antibody

Catalog Number: P00007-2

Submit a product review to Biocompare.com

[Submit a review of this product](#) to Biocompare.com to receive a \$20 Amazon.com giftcard! Your reviews help your fellow scientists make the right decisions. Thank you for your contribution.



Overview

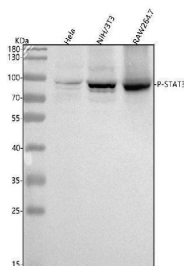
Product Name	Anti-Phospho-STAT3 (Y705) Rabbit Monoclonal Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Phospho-STAT3 (Y705) Rabbit Monoclonal Antibody catalog # P00007-2. Tested in WB, IHC, ICC/IF, IP applications. This antibody reacts with Human, Mouse, Rat.
Application	IP, IF, IHC, ICC, WB
Clonality	Monoclonal IFA-19
Formulation	Rabbit IgG in stabilizing components, phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P40763

Technical Details

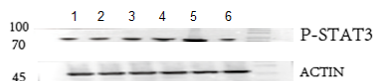
Immunogen	A synthesized peptide derived from human STAT3
Isotype	Rabbit IgG
Form	Liquid
Concentration	0.5mg/ml
Purification	Affinity-chromatography
Suggested Dilutions	WB 1:1000-5000

	IHC 1:50-200 ICC/IF 1:50-200 IP 1:30
--	--

Anti-Phospho-STAT3 (Y705) Rabbit Monoclonal Antibody (P00007-2) Images

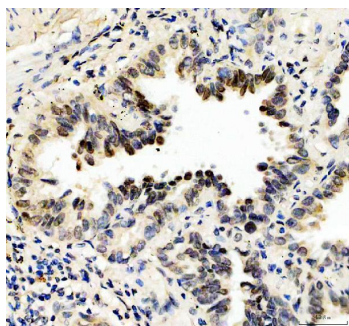


Western blot analysis of STAT3 using anti-STAT3 antibody (P00007-2). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: mouse NIH/3T3 whole cell lysates, Lane 3: mouse RAW264.7 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-STAT3 antigen affinity purified monoclonal antibody (Catalog # P00007-2) at 1:5000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for STAT3 at approximately 88 kDa. The expected band size for STAT3 is at 88 kDa.

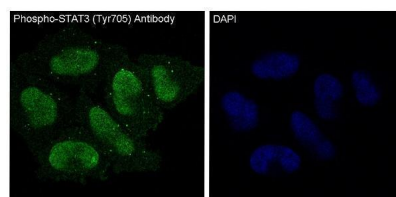


Western blot analysis of Phospho-STAT3 (Y705) using anti-Phospho-STAT3 (Y705) antibody (P00007-2). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: Normal group-rat colon tissue lysates, Lane 2: Model group-rat colon tissue lysates, Lane 3: Triditional Chinese medicine treatment (low dose)-rat colon tissue lysates, Lane 4: Triditional Chinese medicine treatment (medium dose)-rat colon tissue lysates, Lane 5: Triditional Chinese medicine treatment (high dose)-rat colon tissue lysates, Lane 6: Western medicine treatment-rat colon tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Phospho-STAT3 (Y705) antigen affinity purified monoclonal antibody (Catalog # P00007-2) at 1:5000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a HRP Conjugated AffiniPure Goat Anti-rabbit IgG (H+L) secondary antibody at a dilution of 1:5000 for 1 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with ChemiDoc MP system. A specific band was detected for Phospho-STAT3 (Y705) at approximately 88 kDa. The expected band size for Phospho-STAT3 (Y705) is at 88 kDa.

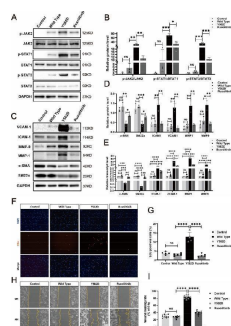
IHC analysis of STAT3 using anti-STAT3 antibody (P00007-2). STAT3 was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval



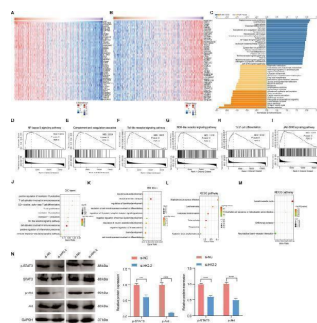
solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-STAT3 Antibody (P00007-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



Immunofluorescent analysis of HeLa cells treated with IFN-alpha, using Phospho-STAT3 (Y705) Antibody.

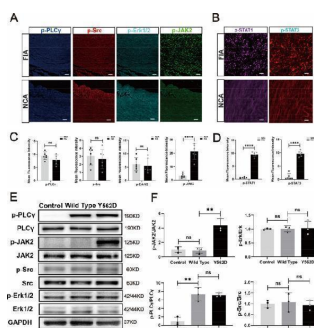


Ruxolitinib effectively reverse the PDGFRB Y562D -induced phenotypic modulation in HBVSMCs. Western blotting illustrates the alterations in p-JAK2 and p-STAT (p-STAT1 and p-STAT3) expression across different treatment groups (A). After normalization to the control group, the relative density of immunoblot bands in (A) is presented in scatter bar graph (B). Immunoblots (C) and relative density of bands (D) of markers associated with phenotypic modulation in HBVSMCs under different treatments are shown. A bar graph is used to present the rt-qPCR results for smooth muscle cell (SMC) markers and inflammatory markers in HBVSMCs under different treatment conditions (E). The results of RT-qPCR are analyzed using Tukey's multiple comparisons test. EDU assay demonstrate the proliferative capacity of HBVSMCs receiving different treatments (F) and statistical analysis of the proportion of Edu-positive cells in the different groups from 5 different fields of each group at $\times 200$ magnification. Statistical differences are detected using Tukey's multiple comparisons test (G). Scratch assay shows the proliferative capacity of HBVSMCs underwent different treatment (H) and statistical analysis of the rate of wound healing (reduced area at 4H /area at 0H) in the different groups from 5 different fields of each group at $\times 200$ magnification. Statistical differences are detected using Tukey's multiple comparisons test (I). ns, no significant; * $p < 0.05$; ** $p < 0.01$. The above experiments are all repeated three times Index in PubMed under a CC BY license. PMID: 38741091

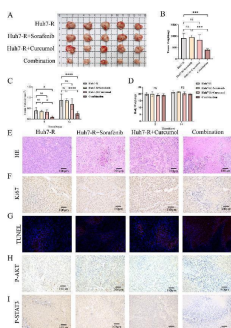


GO term, KEGG pathway, and GSEA enrichment analyses of HK2-related genes. A - B Heatmap of the top 50 positively and negatively related genes with HK2. C KEGG pathway enrichment analysis using the GSEA database. D - I Gene set enrichment plots of the NF-kappaB (D), complement and coagulation cascades (E), Toll-like receptor (F), NOD-like receptor (G), Th17 cell differentiation (H), and JAK-STAT (I) signalling pathways. J - M GO and KEGG enrichment analyses of HK2 positively or negatively related genes (Pearson's $\rho \geq 0.5$, $P < 0.05$). N Expression levels of p-STAT3, STAT3, p-Akt, Akt in HK2-knockdown and control

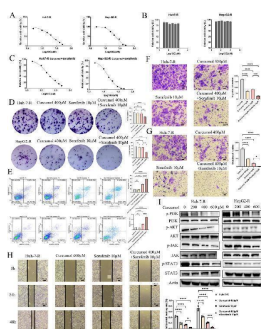
groups in T98 and GBM1 cell lines . Data shown as mean $\pm$ SEM. * P < 0.05, ** P < 0.01, *** P < 0.001, **** P < 0.0001 Index in PubMed under a CC BY license. PMID: 35982398



The JAK2-STAT pathway serves as the major downstream signaling pathway of the mutated PDGFB. mIF demonstrate the important downstream signaling pathway markers of PDGFRbeta (p-JAK, p-Src, p-Erk1/2 and p-PLCgamma) in FIA sections and NCA sections (A). Scale bar, 100 um. Statistical analysis is performed to compare the mean fluorescence intensity of different signal markers between NCAs (n = 4) and FIAs (n = 5) (C). The expression of p-STAT1 and p-STAT3, which are downstream of p-JAK2, is detected by mIF in FIAs and NCAs. Scale bar, 50 um (B). Statistical analysis of mean fluorescence intensity of these marks between NCAs (n = 4) and FIAs (n = 5) (D). Western blotting displays the expression of the important downstream signal pathway markers of PDGFRbeta (p-JAK2, p-Src, p-Erk1/2 and p-PLCgamma) in the HBVSMCs underwent different treatment in vitro (E). Relative density (normalized to Control) of immunoblot bands from (E) corresponding to pPLCgamma, p-JAK2, p-Src, and p-ERK1/2 (n = 3) (F). 'n' represented the number of samples. Three random fields were selected for statistical analysis in each sample, and the average value represented the detection value of this marker in this sample. Tukey's multiple comparisons test is conducted to evaluate the statistical differences. ns, no significant; ***padj < 0.001, ****padj < 0.0001 Index in PubMed under a CC BY license. PMID: 38741091

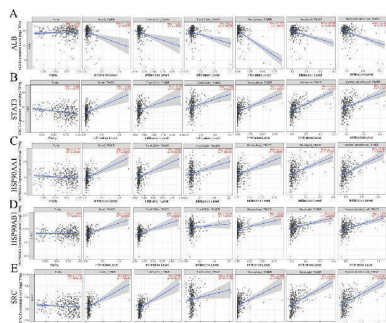


Curcumol combined with sorafenib inhibited the tumor growth of Huh7-R cell xenografts in vivo . (A) The gross appearance of the tumors in xenografted mice. (B) The tumor weight of xenografted mice after 14 days of intervention. (C) Tumor volumes in xenograft mice after 7 and 14 days of intervention. (D) Body weight of xenografted mice before and after 14 days of intervention. (E) HE staining of tumors. Scar bar = 100 um. (F) Ki67 staining of tumors. Scar bar = 100 um. (G) TUNEL staining of tumors. Scar bar = 50 um. (H, I) Tumor tissues were stained for p-AKT (H) , and p-STAT3 (I) . Scar bar = 100 um *p < 0.05, **p < 0.01, ***p < 0.001.Index in PubMed under a CC BY license. PMID: 40242448

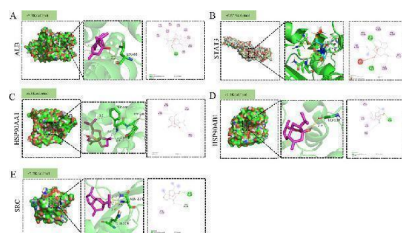


Experimental verification of the function of Curcumol in Sorafenib-resistant HCC cells. (A) Effect of Sorafenib (5, 10, 15, 20, 30, 40, and 50 uM) on Huh7-R and HepG2-R cells viability. (B) Effect of Curcumol (31.25, 62.5, 125, 250, 500, and 1000 uM) on Huh7-R and HepG2-R cells viability. (C) Effect of Curcumol combined with Sorafenib (5, 10, 15, 20, 30, 40, and 50 uM) on Huh7-R and HepG2-R cells viability. (D) Colony formation assay of Huh7-R and HepG2-R cells treated with Curcumol, Sorafenib, and Curcumol combined with Sorafenib, respectively. (E) Flow cytometry detection of apoptosis analysis of Huh7-R and HepG2-R cells treated with Curcumol, Sorafenib, and Curcumol combined with Sorafenib, respectively.

Sorafenib, respectively. (F) Transwell assay was performed to detect the effect of Curcumol on the migratory ability of Huh7-R cells. (G) Transwell assay to detect the effect of Curcumol on the invasive ability of Huh7-R cells. (H) Cell scratch assay of Huh7-R cells treated with Curcumol, Sorafenib, and Curcumol combined with Sorafenib, respectively. (I) The protein expression levels of PI3K/AKT pathway and JAK/STAT3 pathway following intervention with Curcumol combined with Sorafenib. *p < 0.05, **p < 0.01, ***p < 0.001. Index in PubMed under a CC BY license. PMID: 40242448



Relationship between differentially expressed core targets and immune cell infiltration. (A) ALB (B) STAT3 (C) HSP90AA1 (D) HSP90AB1 (E) SRC. Index in PubMed under a CC BY license. PMID: 40242448



Molecular docking pattern of Curcumol with target proteins. (A) ALB (B) STAT3 (C) HSP90AA1 (D) HSP90AB1 (E) SRC. Index in PubMed under a CC BY license. PMID: 40242448

7 Publications Citing This Product

1. PubMed ID: 33152901, He J, Zhang W, Di T, Meng J, Qi Y, Li G, Zhang Y, Su H, Yan W. Water extract of sporoderm-broken spores of Ganoderma lucidum enhanced pd-l1 antibody efficiency through downregulation and relieved complications of pd-l1 monoclonal antibody. Biomed Pharmacother. 2020
2. PubMed ID: 23533997, Khan M, Li T, Ahmad Khan Mk, Rasul A, Nawaz F, Sun M, Zheng Y, Ma T. Biomed Res Int. 2013;2013:719858. Doi: 10.1155/2013/719858. Epub 2012 Dec 27. Alantolactone Induces Apoptosis In Hepg2 Cells Through Gsh Depletion, Inhibition Of Stat3 Activation...
3. PubMed ID: 23693134, Hu T, Zhang C, Tang Q, Su Y, Li B, Chen L, Zhang Z, Cai T, Zhu Y. BMC Cancer. 2013 May 22;13:251. Doi: 10.1186/1471-2407-13-251. Variant G6Pd Levels Promote Tumor Cell Proliferation Or Apoptosis Via The Stat3/5 Pathway In The Human Melanoma Xenogr...

Visit bosterbio.com/anti-phospho-stat3-y705-rabbit-monoclonal-antibody-p00007-2-boster.html to see all 7 publications.

Anti-Phospho-STAT3 (Y705) Rabbit Monoclonal Antibody

For Research Use Only. Not for use in diagnostic procedures.