Stat1(phospho Tyr701) Rabbit Polyclonal Antibody

产品详情

产品货号	产品名称	储存条件	保质期
IM51020	Stat1(phospho Tyr701)Rabbit Polyclonal Antibody	-20℃	1 年

产品概述：

产品货号	IM51020
别名	STAT1;Signal transducer and activator of transcription 1-alpha/beta;Transcription factor ISGF-3 components p91/p84
产品名称	Stat1(phospho Tyr701)Rabbit Polyclonal Antibody
类别	抗体产品
基因名称	STAT1
蛋白名称	Signal transducer and activator of transcription 1-alpha/beta
Clonality	Polyclonal
推荐应用	IF-P,IF-F,IF-ICC,WB,IHC-P,IP,ELISA
反应种属	Human,Mouse,Rat,Monkey
浓度	1mg/ml
存储缓冲液	Liquid in PBS containing 50% glycerol,0.5% BSA and 0.02% New type preservative N.
Human Gene ID	6772

Human Swissprot No.	P42224
Mouse Swissprot No.	P42225
免疫原	The antiserum was produced against synthesized peptide derived from human STAT1 around the phosphorylation site of Tyr701. AA range:668-717
特异性	Phospho-Stat1(Y701)Polyclonal Antibody detects endogenous levels of Stat1 protein only when phosphorylated at Y701.
稀释度	IF-P/IF-F/IF-ICC 1:50-200,WB 1:500-1:2000,IHC-P 1:100-1:300, Immunoprecipitation 2-5 ug/mg lysate,ELISA 1:10000. Not yet tested in other applications.
预测分子量	87kDa
宿主	Rabbit
同种型	Rabbit,IgG
背景介绍	The protein encoded by this gene is a member of the STAT protein family. In response to cytokines and growth factors,STAT family members are phosphorylated by the receptor associated kinases,and then form homo-or heterodimers that translocate to the cell nucleus where they act as transcription activators. This protein can be activated by various ligands including interferon-alpha, interferon-gamma,EGF,PDGF and IL6. This protein mediates the expression of a variety of genes,which is thought to be important for cell viability in response to different cell stimuli and pathogens. Two alternatively spliced transcript variants encoding distinct isoforms have been described. [provided by RefSeq,Jul 2008].

组织表达	B-cell,Brain,Retina,Testis.
细胞定位	Cytoplasm.Nucleus.Translocated into the nucleus upon tyrosine phosphorylation and dimerization,in response to IFN-gamma and signaling by activated FGFR1,FGFR2,FGFR3 or FGFR4 (PubMed:15322115).Monomethylation at Lys-525 is required for phosphorylation at Tyr-701 and translocation into the nucleus (PubMed:28753426).Translocates into the nucleus in response to interferon-beta stimulation(PubMed:26479788).
信号通路	Chemokine;Toll_Like;Jak_STAT;Pathways in cancer;Pancreatic cancer.
功能	Disease:Defects in STAT1 are a cause of mendelian susceptibility to mycobacterial disease(MSMD)[MIM:209950];also known as familial disseminated atypical mycobacterial infection.This rare condition confers predisposition to illness caused by moderately virulent mycobacterial species,such as Bacillus Calmette-Guerin(BCG)vaccine and environmental non-tuberculous mycobacteria,and by the more virulent Mycobacterium tuberculosis.Other microorganisms rarely cause severe clinical disease in individuals with susceptibility to mycobacterial infections,with the exception of Salmonella which infects less than 50% of these individuals.The pathogenic mechanism underlying MSMD is the impairment of interferon-gamma mediated immunity whose severity determines the clinical outcome.Some patients die of overwhelming mycobacterial disease with lepromatous-like lesions in early childhood,whereas others develop, later in life,disseminated but curable infections with tuberculoid granulomas.MSMD is a genetically heterogeneous disease with autosomal recessive,autosomal dominant or X-linked inheritance.disease:Defects in STAT1 are the cause of STAT1

功能	deficiency[MIM:600555].Patients generally suffer from mycobacterial or viral diseases.In the case of complete deficiency, patients can die of viral disease.function:Signal transducer and activator of transcription that mediates signaling by interferons (IFNs).Following type I IFN(IFN-alpha and IFN-beta)binding to cell surface receptors,Jak kinases(TYK2 and JAK1)are activated,leading to tyrosine phosphorylation of STAT1 and STAT2.The phosphorylated STATs dimerize,ssociate with ISGF3G/IRF-9 to form a complex termed ISGF3 transcription factor,that enters the nucleus.ISGF3 binds to the IFN stimulated response element(ISRE)to activate the transcription of interferon stimulated genes,which drive the cell in an antiviral state. In response to type II IFN(IFN-gamma),STAT1 is tyrosine-and serine-phosphorylated.It then forms a homodimer termed IFN-gamma-activated factor(GAF),migrates into the nucleus and binds to the IFN gamma activated sequence(GAS)to drive the expression of the target genes,inducing a cellular antiviral state.online information:STAT1 entry,online information:STAT1 mutation db,PTM:Phosphorylated on tyrosine and serine residues in response to IFN-alpha,IFN-gamma,PDGF and EGF.Phosphorylation on Tyr-701(lacking in beta form)by JAK promotes dimerization and subsequent translocation to the nucleus.Phosphorylation on Ser-727 by several kinases including MAPK14,ERK1/2 and CAMKII on IFN-gamma stimulation,regulates STAT1 transcriptional activity. Phosphorylation on Ser-727 promotes sumoylation though increasing interaction with PIAS.Phosphorylation on Ser-727 by PKCdelta induces apoptosis in response to DNA-damaging agents.PTM:Sumoylated by SUMO1,SUMO2 and SUMO3.Sumoylation is enhanced by IFN-gamma-induced phosphorylation on Ser-727,and by interaction with PIAS proteins.

功能	Enhances the transactivation activity.similarity:Belongs to the transcription factor STAT family.similarity:Contains 1 SH2 domain.subcellular location:Translocated into the nucleus in response to IFN-gamma-induced tyrosine phosphorylation and dimerization.subunit:Isoform alpha homodimerizes upon IFN-gamma induced phosphorylation.Heterodimer with STAT2 upon IFN-alpha/beta induced phosphorylation.Interacts with NMI.Interacts with Sendai virus C',C,Y1 and Y2 proteins,Nipah virus P,V and W proteins,and rabies virus phosphoprotein preventing activation of ISRE and GAS promoter(By similarity).Interacts with HCV core protein;the interaction results in STAT1 degradation.Interacts with PIAS1;the interaction requires phosphorylation on Ser-727 and inhibits STAT1 activation.
纯化	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

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北京伊事达科技有限公司
电话：13564444959
官网：www.followme-shop.com
地址：北京市海淀区东北旺西路58号尚科办公社区C区一楼

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