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Datasheet for 600-401-C64

STAT3 phospho Y705 Antibody

Overview

Description:	Anti-STAT3 pY705 (RABBIT) Antibody - 600-401-C64
Item No.:	600-401-C64
Size:	100 µg
Applications:	ELISA, IHC, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	Signal transducer and activator of transcription 3 (Stat3) belongs to a family of cytoplasmic transcription factors that can be activated by phosphorylation by its cell surface receptor. Stat3 plays a key role in many cellular processes such as cell growth and apoptosis. It also mediates cellular responses to interleukins, KITLG/SCF,EGF, IFN-alpha and other growth factors and may mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4. Stat3 forms a homodimer or a heterodimer with a related family member (e.g. STAT1). Activation occurs through phosphorylation of tyrosine 705 and serine 727. Phosphorylation of Stat3 at Tyr705 induces Stat3 dimerization and nuclear translocation. Serine phosphorylation is important for stable DNA-binding of Stat3 homodimers and maximal transcriptional activity. Stat3 can have a dual role in cancer, it has been found that Stat3 protein can promote oncogenesis and have a tumor suppressor role depending upon the mutational background of the tumor.
Synonyms:	rabbit anti-STAT3 pY705 antibody, Signal transducer and activator of transcription 3, Acute-phase response factor, APRF, STAT3 phospho Y705, STAT3 (pTry705)
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	STAT3
Reactivity:	Human

PTM Specificity:	Phosphorylation
Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified Stat3 antibody was prepared by repeated immunizations with a phosphorylated synthetic peptide corresponding to the region of amino acids surrounding tyrosine 705 of human Stat3.
Purity/Specificity:	Anti-STAT3 antibody is an affinity-purified antibody and is directed against the phosphorylated form of human STAT3 protein at the Y705. Anti-Stat3 antibody was affinity purified from monospecific antiserum by immunoaffinity purification. Antiserum was first purified against the phosphorylated form of the immunizing peptide. The resultant affinity purified antibody was then cross adsorbed against the non-phosphorylated form of the immunizing peptide. Anti-Stat3 antibody is specific for the phosphorylated form of the protein. Reactivity with non-phosphorylated Stat3 protein is minimal by ELISA and western blot. A BLAST analysis was used to suggest cross reactivity with Stat3 antibodies from human, mouse, rat, and pig based on 100%sequence homology with the immunogen. Reactivity against homologues from other sources is not known.
Relevant Links:	• UniProtKB - P40763 • GeneID - 6774 • NCBI - NP_644805.1

Application Details

Tested Applications:	ELISA, IHC, WB
Application Note:	STAT3 pY705 antibody has been tested for use in ELISA, IHC, and Western Blot. Expect a band approximately 88.1 kDa in size corresponding to phosphorylated STAT3 protein by western blotting in the appropriate stimulated tissue or cell lysate or extract. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000 - 1:30,000
IHC:	User Optimized
WB:	1 µg/mL

Formulation

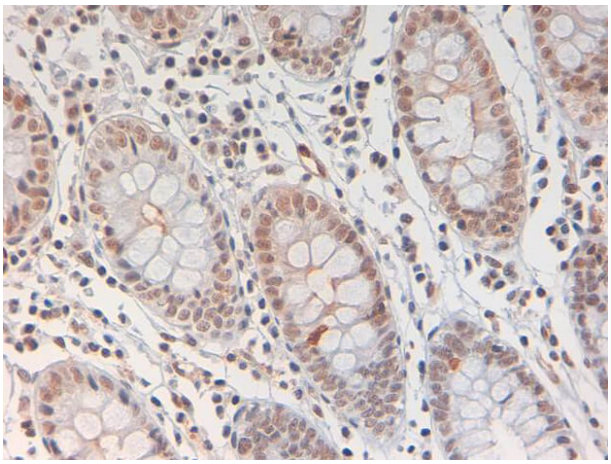
Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

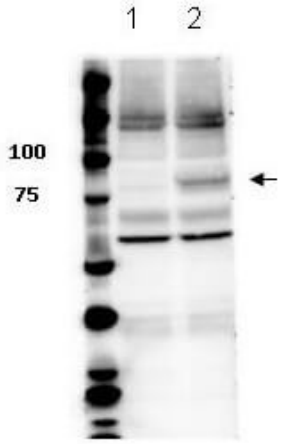
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20°C prior to opening. Aliquot contents and freeze at -20°C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Immunohistochemistry
Immunohistochemistry of Rabbit anti STAT3 pY705 Antibody. Tissue: Human Colon at 40X in colon tissue at pH 9. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: STAT3 pY705 antibody at 10 µg/mL for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: STAT3 phospho Y705 is nuclear and cytoplasmic. Staining: STAT3 (pTyr705) as precipitated red signal with hematoxylin purple nuclear counterstain.



Western Blot
Western Blot of Rabbit anti-Stat3 pY705 antibody. Lane 1: Jurkat lysate (p/n W09-000-370). Lane 2: Jurkat lysate IFN-α treatment. Load: 35 µg per lane. Primary antibody: STAT3 pY705 antibody at 1:1000 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO (p/n B501-0500) overnight at 4°C. Predicted/Observed size: 88 kDa, ~90kDa for STAT3py705. Other band(s): STAT 3 pY705 splice variants and isoforms.

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