

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human STAT3 when phosphorylated at Y705 in Western blots.
Source	Recombinant Monoclonal Rabbit IgG _{2B} Clone # 1004G
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Phosphopeptide containing the human STAT3 Y705 site Accession # P40763
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	0.25-1 µg/10 ⁶ cells	Daudi Human Cell Line treated with IFN alpha

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Human STAT-3/STAT3a (signal transducer and activator of transcription 3; also called APRF) is a 90-95 kDa member of the STAT family of transcription factors. It is 770 amino acids (aa) in length, contains one SH2 domain (aa 580-670), and is found in almost all cell types. STAT3 mediates gp130, LIF-R, OB-R, IL10-R and EGFR signaling. Upon activation, receptors such as gp130 phosphorylate STAT3 at Ser727, which results in transcriptional activation. Phosphorylation at Tyr705 mediates homo- and hetero-dimerization with STAT1 and nuclear translocation, and is an important event in oncogenic transformation. The STAT3b isoform shows a six aa substitution for aa 716-770, thus eliminating the Ser727 site. Human and mouse STAT3a share 99% aa sequence identity.

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