

DESCRIPTION

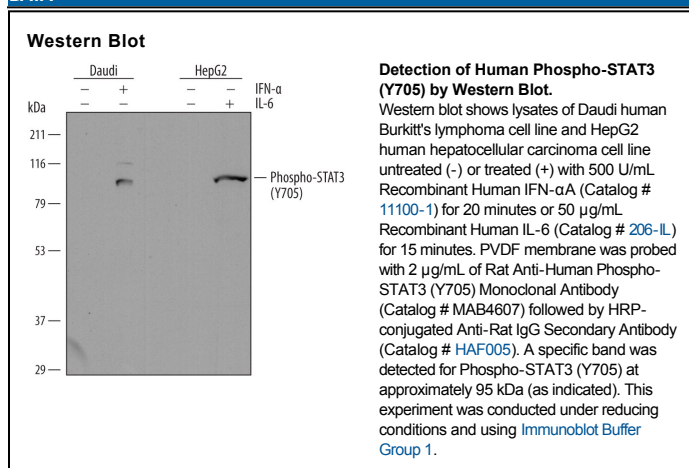
| | |
|---------------------------|---|
| Species Reactivity | Human |
| Specificity | Detects human STAT3 when phosphorylated at Y705. |
| Source | Monoclonal Rat IgG _{2B} Clone # 805435 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | Phosphopeptide containing the human STAT3 Y705 site |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

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 |
|---------------------|---------------------------|-----------|
| Western Blot | 2 µg/mL | See Below |

DATA



PREPARATION AND STORAGE

| | |
|--------------------------------|---|
| Reconstitution | Sterile PBS to a final concentration of 0.5 mg/mL. |
| Shipping | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| Stability & Storage | <p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

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.