

Product datasheet for **TA319556**

STAT2 Mouse Monoclonal Antibody [Clone ID: 19G8.H2.H6]

Product data:

Product Type:	Primary Antibodies
Clone Name:	19G8.H2.H6
Applications:	IHC, WB
Recommend Dilution:	ELISA: 1:5,000 - 1:10,000, WB: 1:1000, IHC: 1:2.5 ug/mL
Reactivity:	Human, Mouse
Host:	Mouse
Clonality:	Monoclonal
Immunogen:	This monoclonal antibody was produced by repeated immunizations with a synthetic peptide corresponding to residues near the carboxy terminus of mouse STAT2 protein.
Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Concentration:	1 mg/ml
Gene Name:	signal transducer and activator of transcription 2
Database Link:	NP_005410 Entrez Gene 20847 Mouse Entrez Gene 6773 Human
Synonyms:	IMD44; ISGF-3; P113; STAT113



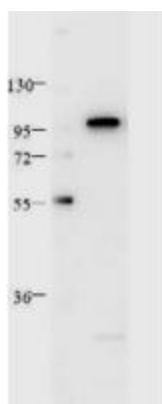
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Note: STAT2 is a member of the STAT family of transcription factors. Unlike other STATs, STAT2 is unique as it can only be activated by interferons (IFNs). STAT2 is a critical component in mediating many IFN-stimulated biological activities including antiproliferation and antiviral responses. Upon IFN treatment, STAT1 and STAT2 become tyrosine phosphorylated, assemble as heterodimers that bind IRF9 to form the ISGF3 complex. This complex translocates to the nucleus, binds to promoters of IFN-stimulated genes and mediates gene transcription. Consequently, mutations in STAT2 or loss of STAT2 expression leads to impairment in IFN signal transduction and gene activation. IFN-alpha is an approved drug for the treatment of several forms of cancer. Yet only a subset of patients who receive IFN-alpha therapy benefit from the treatment. Given that STAT2 is activated by IFNs, it is important to define if the reduced or lack of antitumor effects seen in cancer patients on IFN therapy is due to in defects in STAT2 function. Our goal is to identify regions/motifs within the structural domains of STAT2 that not only are essential for the tyrosine phosphorylation of STAT2, but also regulate the antitumor effects of IFN-alpha. Collectively, the results of our studies will emphasize the physiological role of STAT2 in cancer. From a clinical viewpoint, cancer patients who may benefit the most from receiving IFN-alpha therapy can be selected based on their STAT2 function.

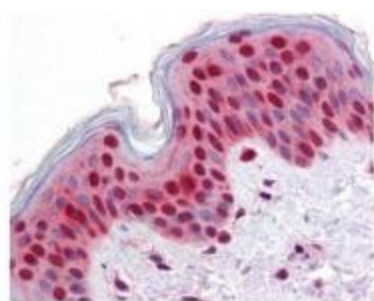
Protein Families: Druggable Genome, Transcription Factors

Protein Pathways: Chemokine signaling pathway, Jak-STAT signaling pathway

Product images:



HeLa whole cell lysate was loaded at 1 ug. The blot was blocked with 1% BSA in TBST for 30 min at RT, then washed and incubated with anti-Stat2 antibody in 3% BSA/TBST at 1:1,000 overnight at 4C. After washing, blot was incubated with HRP Rb a-Ms IgG (p/n 610-4302) antibody in blocking buffer (p/n MB-070) for 30 minutes at RT. Data was collected using Bio-Rad VersaDoc® 4000 MP.



anti-Stat2 monoclonal antibody was used at 2.5 ug/mL to detect Stat2 in squamous epithelium from human skin (40X) showing moderate to strong nuclear and faint to moderate cytoplasmic staining (image). Expression of Stat2 is expected to be cytoplasmic, and nuclear upon activation. The image shows the localization of the antibody as the precipitated red signal, with a hematoxylin purple nuclear counterstain. Tissue was formalin-fixed and paraffin embedded.