

## Product datasheet for **TA396768S**

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

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	19G8.H2.H6
Applications:	ELISA, IHC, WB
Recommended Dilution:	<b>WB:</b> 1:1000 <b>IHC:</b> 1:2.5 µg/mL <b>ELISA:</b> 1:5,000 - 1:10,000
Reactivity:	Human
Host:	Mouse
Isotype:	IgG2a, kappa
Clonality:	Monoclonal
Immunogen:	This monoclonal antibody was produced by repeated immunizations with a synthetic peptide corresponding to residues surrounding Y690 of mouse STAT2 protein.
Specificity:	This Protein-A purified antibody is directed against human STAT2 protein. A BLAST analysis was used to suggest cross-reactivity with STAT2 protein from human, rat (73%) and mouse (76%), sources based on homology with the immunizing sequence. Reactivity against homologues from other sources is not known.
Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Concentration:	1.0 mg/mL - lot specific
Conjugation:	Unconjugated
Storage:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Stability:	Expiration date is three (3) months from date of receipt.
Gene Name:	signal transducer and activator of transcription 2



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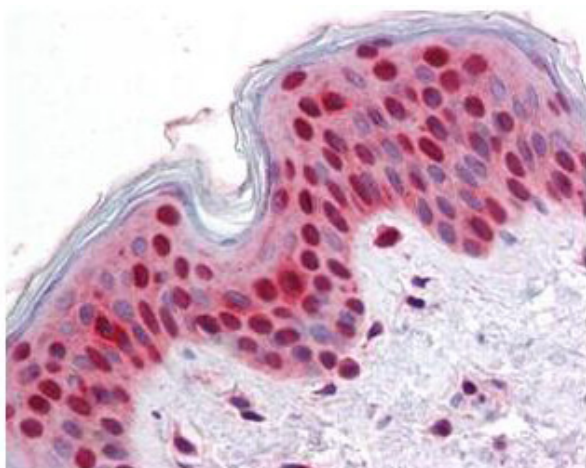
**Database Link:** [Entrez Gene 6773 Human Q9WVL2](#)

**Background:** 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 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.

**Synonyms:** mouse anti-STAT2 antibody, Stat 2, Signal transducer and activator of transcription 2, p113

**Note:** This Protein-A purified antibody has been tested for use in ELISA, immunohistochemistry, and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 113 kDa in size corresponding to STAT2 protein by western blotting in the appropriate cell lysate or extract.

### Product images:



Rockland's anti-Stat2 monoclonal antibody was used at a 2.5 µg/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. Personal Communication, Vasiliki Demas, LifeSpan Biosciences, Seattle, WA.