Technical Data Sheet

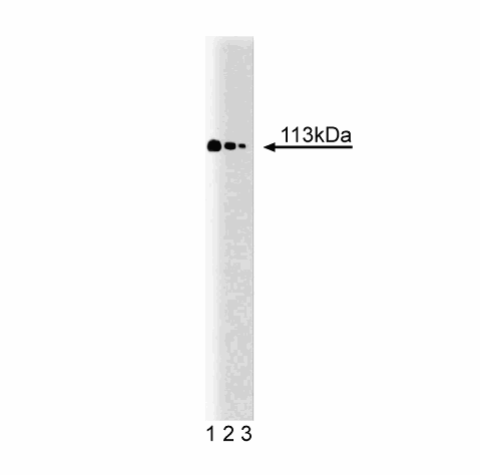
Purified Mouse Anti-Human Stat2

Product Information

Material Number:	**610187**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	22/Stat2
Immunogen:	Human Stat2 aa. 1-178
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Human
Target MW:	113 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

The Stat proteins function as both cytoplasmic signal transducers and activators of transcription. Stat91/84 (the two proteins are the result of alternate splicing-Stat91 has an additional 38 C-terminal amino acids) and Stat113 were the first identified members of this protein family. These three polypeptides contain both SH2 and SH3 domains and have also been described as members of the ISGF3 (interferon-stimulated gene factor 3) complex. With the discovery of additional members of the Stat family (Stats3 & 4), the nomenclature has been revised to indicate the Stat family members in the order of their discovery. Stat 91, 84, and 113 have become Stat1α, Stat1β, and Stat2, respectively. In response to IFN-α treatment, Stat1α, Stat1β, and Stat2 become tyrosine-phosphorylated and migrate to the nucleus where they join a 48 kDa DNA binding protein and subsequently direct the transcription at IFN-α responsive elements. The genes encoding Stat2 and Stat1 are closely related. An extended acidic C-terminal region exclusive to Stat2 implicates a potential role in gene activation. Stat2 phosphorylation can occur independently of Stat1α, but phosphorylated Stat2 does appear to be dependent on its interaction with Stat1α for efficient nuclear localization and/or stability.



Western blot analysis of Stat2 on a K-562 cell lysate (Human bone marrow myelogenous leukemia; ATCC CCL-243). *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-human Stat2 antibody.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20°C.

Application Notes

Application

Western blot	Routinely Tested
Immunoprecipitation	Tested During Development
Immunofluorescence	Not Recommended
Immunohistochemistry	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

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For country-specific contact information, visit **bdbiosciences.com/how_to_order/**

Suggested Companion Products

Catalog Number	Name	Size	Clone
611550	K-562 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Blesofsky WA, Mowen K, Arduini RM. Regulation of STAT protein synthesis by c-Cbl. *Oncogene.* 2001; 20(50):7326-7333.(Biology: Western blot)

Duff JL, Quinlan KL, Paxton LL, Naik SM, Caughman SW. Pervanadate mimics IFNgamma-mediated induction of ICAM-1 expression via activation of STAT proteins. *J Invest Dermatol.* 1997; 3(295):2301.(Biology: Gel shift)

Fu XY, Schindler C, Improta T, Aebersold R, Darnell JE Jr. The proteins of ISGF-3, the interferon alpha-induced transcriptional activator, define a gene family involved in signal transduction. *Proc Natl Acad Sci U S A.* 1992; 89(16):7840-7843.(Biology)

Ruff-Jamison S, Chen K, Cohen S. Induction by EGF and interferon-gamma of tyrosine phosphorylated DNA binding proteins in mouse liver nuclei. *Science.* 1993; 261(5129):1733-1736.(Biology)

Russell-Harde D, Wagner TC, Rani MR. Role of the intracellular domain of the human type I interferon receptor 2 chain (IFNAR2c) in interferon signaling. Expression of IFNAR2c truncation mutants in U5A cells. *J Biol Chem.* 2000; 275(31):23981-23985.(Biology: Immunoprecipitation, Western blot)