

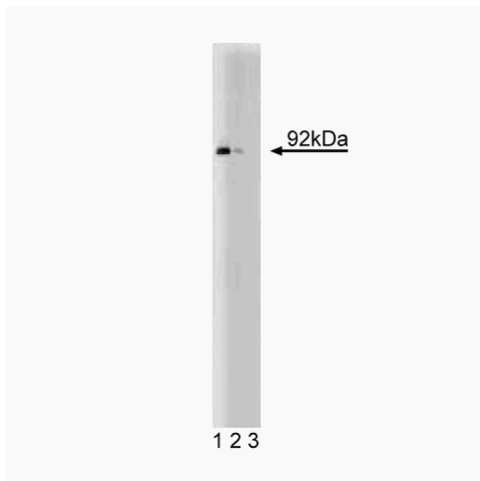
Technical Data Sheet

Purified Mouse Anti-Stat5**Product Information**

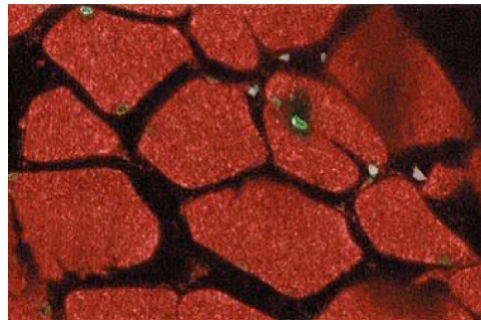
Material Number:	610192
Alternate Name:	MGF
Size:	150 µg
Concentration:	250 µg/ml
Clone:	89/Stat5
Immunogen:	Sheep Stat5 aa. 451-649
Isotype:	Mouse IgG2b
Reactivity:	QC Testing: Human Tested in Development: Dog, Mouse, Rat
Target MW:	92 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Stat5, also known as mammary gland factor (MGF) has been shown to play a critical role in the lactogenic hormone response and has been well characterized in mammary epithelial cells. The SH3 domain of MGF shows extensive homology with the SH2 domains of Stat1 and Stat2. This homology has led to its classification as a member of the Stat family. The Stat proteins function both as cytoplasmic signal transducers and as activators of transcription. Stat (Signal transducer and activators of transcription) proteins are critical mediators of the biologic activity of cytokines, including interleukins, interferons, erythropoietin, and growth factors. Ligand-receptor interaction leads to activation of constitutively associated JAK family kinases and subsequent recruitment and activation of Stat proteins by tyrosine phosphorylation. Active Stat proteins then move to the nucleus to promote transcription of cytokine-inducible genes. Stat5a has been shown to be involved in lactogenesis and mammary development, while Stat5b has been shown to be involved in growth hormone signaling and to play a role in liver gene expression. Stat5 activity is tightly regulated throughout gestation, lactation, and post-lactation.



Western blot analysis of Stat5 on human endothelial cell lysate. Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of anti-Stat5 antibody.



Immunofluorescent staining of rabbit muscle with anti-Stat5 antibody.

Preparation and Storage

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

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Application Notes

Application

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

Recommended Assay Procedure:

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

Suggested Companion Products

Catalog Number	Name	Size	Clone
611450	Human Endothelial Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmlingen/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

Buitenhuis M, Baltus B, Lammers JW, Coffey PJ, Koenderman L. Signal transducer and activator of transcription 5a (STAT5a) is required for eosinophil differentiation of human cord blood-derived CD34+ cells. *Blood*. 2003; 101(1):134-142.(Clone-specific: Gel shift)
Chughtai N, Schimchowitsch S, Lebrun JJ, Ali S. Prolactin induces SHP-2 association with Stat5, nuclear translocation, and binding to the beta-casein gene promoter in mammary cells. *J Biol Chem*. 2002; 277(34):31107-31114.(Clone-specific: Immunofluorescence, Western blot)
Gouilleux F, Wakao H, Mundt M, Groner B. Prolactin induces phosphorylation of Tyr694 of Stat5 (MGF), a prerequisite for DNA binding and induction of transcription. *EMBO J*. 1994; 13(18):4361-4369.(Biology)
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Sadowski CL, Choi TS, Le M, Wheeler TT, Wang LH, Sadowski HB. Insulin Induction of SOCS-2 and SOCS-3 mRNA expression in C2C12 Skeletal Muscle Cells Is Mediated by Stat5. *J Biol Chem*. 2001; 276(23):20703-20710.(Clone-specific: Immunoprecipitation)