Technical Data Sheet Purified Mouse Anti-Human ISGF3y

Material Number:	610285
Alternate Name:	Interferon Stimulated Gene Factor-3
Size:	50 µg
Concentration:	250 µg/ml
Clone:	6/ISGF3γ
Immunogen:	Human ISGF3γ (p48) aa.126-351
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	48 kDa
Storage Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤ azide.	

Description

ISGF3y is a nuclear DNA-binding protein. ISGF3 (Interferon Stimulated Gene Factor-3) is the primary transcription activator induced by the binding of interferon a (IFNa) to cell surface receptors. The functional ISGF3 is a complex of four polypeptides of 113 kDa (Stat2), 91 kDa (Stat1α), 84 kDa (Stat1β), and 48 kDa. The first three polypeptides (also known as ISGF3γ) each contain SH2 and SH3 domains. In response to either IFNa, IFNy, EGF, PDGF, or CSF-1 binding their respective receptors, the cytoplasmic ISGF3a subunits are tyrosine-phosphorylated and translocated to the nucleus where they form an active complex with the 48 kDa protein (ISGF37). This complex is responsible for modulating the transcription of interferon-stimulated genes (ISGs). Activated ISGF3a stabilizes ISGF3y-DNA interactions. This results in a ternary protein-DNA complex with a 25-fold greater stability than ISGF37-DNA. Thus, growth factors and cytokines activate a common signal transduction pathway that leads to the phosphorylation and nuclear translocation of a group of latent cytoplasmic transcription factors.





Western blot analysis of ISGF3y on a human endothelial cell lysate. Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-human ISGF3y antibody.

Immunofluorescence staining of human fibroblasts

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

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

Recommended Assay Procedure:

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

Dumler I, Kopmann A, Wagner K. Urokinase induces activation and formation of Stat4 and Stat1-Stat2 complexes in human vascular smooth muscle cells. *J Biol Chem.* 1999; 274(34):24059-24065.(Biology: Western blot)

Köster M, Hauser H. Dynamic redistribution of STAT1 protein in IFN signaling visualized by GFP fusion proteins. *Eur J Biochem.* 1999; 260(1):137-144. (Biology: Immunofluorescence)

Veals SA, Schindler C, Leonard D. Subunit of an alpha-interferon-responsive transcription factor is related to interferon regulatory factor and Myb families of DNA-binding proteins. *Mol Cell Biol.* 1992; 12(8):3315-3324. (Biology)