# biotechne

## Human IFN-β Antibody

Monoclonal Mouse IgG<sub>1</sub> Clone # 76703 Catalog Number: MAB814

**R**Dsystems

DESCRIPTION		
Species Reactivity	Human	
Specificity Detects human IFN-β in Western blots. In Western blots, this antibody does not cross-react with recombinant human IFN-α.		
Source	Monoclonal Mouse IgG <sub>1</sub> Clone # 76703	
Purification	Protein A or G purified from ascites	
Immunogen	<i>E. coli</i> -derived recombinant human IFN-β Met22-Asn187 Accession # P01574	
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.	
Formulation	ulation Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS	

#### APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.				
	Recommended Concentration	Sample		
Western Blot	1 µg/mL	Recombinant Human IFN-β		
Flow Cytometry	0.25 μL/10 <sup>6</sup> cells	M1 macrophages treated with 50 ng/mL each of rhGM-CSF (Catalog # 215-GM) for 6 days followed by an overnight polarization with IFNg and LPS ( Catalog # 285-IF) and restimulated with monensin for 3 hours (3uM)		
Neutralization	Measured by its ability to neutralize IFN-β inhibition of EMCV-induced cytopathy in the HeLa human cervical epithelial carcinoma cell line. Meager, A. (1987) in Lymphokines and Interferons, a Practical Approach. Clemens, M.J. et al. (eds): IRL Press. 129. The Neutralization Dose (ND <sub>50</sub> ) is typically 1.50-18.0 µg/mL in the presence of 50 pg/mL Recombinant Human IFN-β.			

DATA



IFN-β Inhibition of EMCVinduced Cytopathy and Neutralization by Human IFN-β Antibody. Recombinant Human IFN-ß (Catalog # 8499-IF) reduces the Encephalomyocarditis Virus (EMCV)-induced cytopathy in the HeLa human cervical epithelial carcinoma cell line in a dose-dependent manner (orange line), as measured by crystal violet staining. Inhibition of EMCV activity elicited by Recombinant Human IFN-ß (50 pg/mL) is neutralized (green line) by increasing concentrations of Human IFN-ß Monoclonal Antibody (Catalog # MAB814). The ND<sub>50</sub> is typically 1.50-18.0 µg/mL.



Detection of IFN-B in M1 macrophages by Flow Cytometry. M1 macrophages treated with 50 ng/mL each of rhGM-CSF (Catalog # 215-GM) for 6 days followed by an overnight polarization with IFNg and LPS (Catalog # 285-IF) and restimulated with monensin for 3 hours (3uM) were stained with Mouse Anti-Human CD14 PEconjugated Monoclonal Antibody (Catalog # FAB3832P) and either (A) Mouse Anti-Human IFN-β Monoclonal Antibody (Catalog # MAB814) or (B) Mouse IgG1 Isotype Control (Catalog # MAB002) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). View our protocol for Staining Intracellular Molecules.

PREPARATION AND STORAGE		
Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.	
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C	
Stability & Storage	<ul> <li>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</li> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>	

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### BACKGROUND

Interferon beta (IFN-β) is synthesized and secreted by fibroblasts and many other cell types in response to pathogens. IFN-β binding to type I interferon receptors induces the upregulation of IRF-7 and activation of Rnase L. IRF-7 can exert a positive feedback on IFN-β production. RNase L cleaves both viral and cellular single stranded mRNA, thereby limiting viral replication and dissemination.

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