Background: Interferons (IFNs) appear both locally and systematically early after viral infection and participate in limiting the spread of infection; they also affect cell differentiation, growth, surface antigen expression and immunoregulation (1). There are three naturally occurring interferons: α, β and γ. IFN-α is derived from lymphoblastic tissue and has a number of therapeutic applications in the treatment of various human cancers and diseases of viral origin. Recombinant IFN-α from both natural and synthetic genes binds to a common cell surface receptor and induces antiviral activity in a variety of cell lines. When binding to discrete cell surface receptors on target cells, IFN-α induces rapid changes in Jak/Stat phosphorylation, which initiates the Jak/Stat signaling pathway (2). IFN-α signaling also involves production of DAG without an increased intracellular free calcium concentration and the subsequent activation of calcium-independent isoforms of PKC (β and ε) (3). All IFN-α signaling pathways lead to final alterations of gene expression, which mediate their pleiotropic biologic activities.

Specificity/Sensitivity: IFN-α (6B18) Mouse mAb detects recombinant human interferon-α protein. This antibody does not cross-react with human interferon-β and -γ.

Source/Purification: Monoclonal antibody is produced by immunizing animals with purified natural human interferon-α proteins.

Background References: