Mouse Interferon Alpha 4, mammalian

Catalog No. 12115

- Exhibits higher antiviral potency than Mouse IFN Alpha A in standard cytopathic effect (CPE) assay
- Authentic sequence provides a better model of native Mu-IFN-α4 (glycosylated protein)
- Provides consistent performance and reproducible results
- Early endogenous expression naturally primes expression of a wide repertoire of Mu-IFN-α protein subtypes

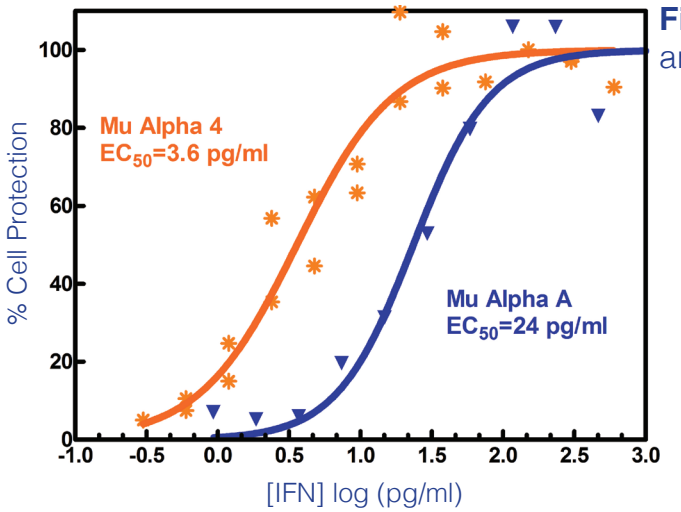

Figure 1. Comparison of Mu-IFN-αA and Mu-IFN-α4 Antiviral Activity

Most mammalian species have multiple IFN-α subtypes. Although the reasons for these multiple subtypes are not fully known, there are clear cell type and temporal differences in their expression. A recent study established a nomenclature for the murine IFN-α subtypes[1] and determined relative activities of the subtypes with protein quantification by phosphorimaging of metabolically-labeled protein. In this study, Mu IFN-α4 was deemed to have average antiviral activity when compared with the potencies of the other subtypes.

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Mu-IFN-α4 was initially cloned by Zwarthoff[2], and has been extensively studied. It is apparently expressed early in viral infection in a protein synthesis-independent manner, and its expression is induced by phosphorylation of IRF-3. It may be that Mu-IFN-α4, like IFN-α, has a priming function on cells, enabling the expression of other Mu-IFN-α subtypes[3,4]. Thus, this interferon is among the first observed after viral infection. Intriguingly, while this interferon is expressed in a large variety of cell types, one report suggests that the expression level in dendritic cells is low to absent[5].

Product Citations

1. van Pesch, V., *et al*. (2004) Characterization of the murine alpha interferon gene family. *Journal of Virology* 78(15):8219-28.
2. Zwarthoff, EC, *et al*. (1985) Organization, structure and expression of murine interferon alpha genes. *Nucleic Acids Research* 13(3):791-804.
3. Mesplède, T., *et al*. (2003) Positive and negative control of virus-induced interferon-A gene expression. *Autoimmunity* 36(8):447-55.
4. Asselin-Paturel, C. and Trinchieri, G. (2005) Production of type I interferons: plasmacytoid dendritic cells and beyond. *The Journal of Experimental Medicine* 202(4):461-5.
5. Barchet, W., *et al*. (2002) Virus-induced interferon α production by a dendritic cell subset in the absence of feedback signaling *in vivo*. *The Journal of Experimental Medicine* 195(4):507.

Product Information

Catalog Number	12115-1
Description	Mouse Interferon Alpha 4, mammalian
Size	1 x 10^5 units

For more information on this product, visit our website.