Recombinant Mouse IFN-κ

Catalog Number: 8437-MK/CF

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived Leu22-Lys199 Accession # Q7TSL0
N-terminal Sequence Analysis	Leu22
Predicted Molecular Mass	21 kDa

SPECIFICATIONS

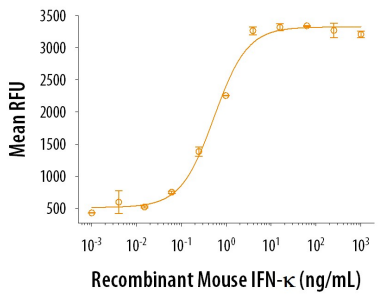
SDS-PAGE	19-22 kDa, reducing conditions
Activity	Measured in an anti-viral assay using L-929 mouse fibroblast cells infected with encephalomyocarditis (EMC) virus. Vogel, S.N. *et al.* (1982) Infect. Immunol. **38**:681. The ED_{50} for this effect is typically 0.2-1.2 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE with silver staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in Sodium Acetate, NaCl and EDTA. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 µg/mL in sterile water.
Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity



Recombinant Mouse IFN-κ (Catalog # 8437-MK/CF) exhibits anti-viral activity in L-929 mouse fibroblast cells infected with encephalomyocarditis (EMC) virus. The ED_{50} for this effect is typically 0.2-1.2 ng/mL.

BACKGROUND

Interferon (IFN)-κ is a member of the type I IFN family, which also includes IFN-α, -β, -ε, and -ω. Mouse IFN-κ is expressed at low levels in peritoneal macrophages and its expression is up-regulated by double-stranded (ds) RNA and IFN-γ (1). Mice over-expressing IFN-κ in pancreatic β cells developed type I diabetes, similar to what has been reported for mice over-expressing IFN-α, -β, and -γ (1-4). Mouse IFN-κ shares 68% and 30% amino acid sequence identity with rat and human IFN-κ, respectively. Human IFN-κ has been detected in keratinocytes, monocytes, and monocyte-derived dendritic cells and is reported to have contact-dependent antiviral activity (5-7). Human papillomavirus (HPV) 16 oncogene expression, which is necessary for the development of cervical cancer, has been shown to down-regulate human IFN-κ expression (8-11).

References:

1. Vassileva, G. *et al.* (2003) J. Immunol. **170**:5748.
2. Stewart, T.A. *et al.* (1993) Science **260**:1942.
3. Sarvetnick, N. *et al.* (1988) Cell **52**:773.
4. Pelegrin, M. *et al.* (1998) J. Biol. Chem. **273**:12332.
5. LaFleur, D.W. *et al.* (2001) J. Biol. Chem. **276**:39765.
6. Nardelli, B. *et al.* (2002) J. Immunol. **169**:4822.
7. Buontempo, P.J. *et al.* (2006) J. Interferon Cytokine Res. **26**:40.
8. Rincon-Orozco, B. *et al.* (2009) Cancer Res. **69**:8718.
9. DeCarlo, C.A. *et al.* (2010) Lab. Invest. **90**:1482.
10. Reiser, J. *et al.* (2011) J. Virol. **85**:11372.
11. Sunthamala, N. *et al.* (2014) PLoS One **9**:e91473.

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