

DESCRIPTION

Source	<i>E. coli</i> -derived Leu22-Arg208 (Cys175Ser), with an N-terminal Met and a C-terminal 6-His tag Accession # Q86WN2
N-terminal Sequence Analysis	Met
Predicted Molecular Mass	23 kDa

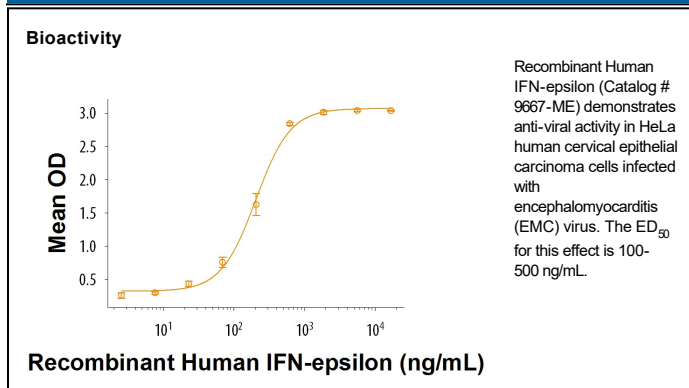
SPECIFICATIONS

SDS-PAGE	23 kDa, reducing conditions
Activity	Measured in anti-viral assays using HeLa human cervical epithelial carcinoma cells infected with encephalomyocarditis (EMC) virus. Meager, A. (1987) in <i>Lymphokines and Interferons, a Practical Approach</i> . Clemens, M.J. <i>et al.</i> (eds): IRL Press. 129. The ED ₅₀ for this effect is 100-500 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in Citric Acid and CHAPS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 µg/mL in water.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 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



BACKGROUND

Interferon-epsilon (IFN-epsilon) is a secreted, approximately 23 kDa member of the type I interferon family of molecules (1). Mature human IFN-epsilon shares 62% and 60% amino acid sequence identity with rat and mouse IFN-epsilon, respectively. IFN-epsilon signals through IFN-alpha / beta R1 and IFN-alpha / beta R2 and contributes to TNF-alpha induced signaling (2, 3). It is constitutively expressed in epithelial cells lining the lung, intestines, testes, and female reproductive tract, and it is further up-regulated in the uterus by estrogen (2-6). IFN-epsilon provides mucosal barrier protection against the pathogens Chlamidia and Herpes simplex virus 2 (2). It induces B cell activation, attraction of CD8⁺ T cells to sites of virus infection and directly mediates protection against viral and bacterial genital infections (5, 7). Differential regulation of genes related to central nervous system by recombinant human IFN-ε suggests its role in maintenance of the structure and function of brain (8).

References:

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4. Demers, A. *et al.* (2014) *J. Leukoc. Biol.* **96**:1101.
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6. Hermant, P. *et al.* (2013) *PLoS One* **8**:e71320.
7. Day, S.L. *et al.* (2008) *J. Immunol.* **180**:7158.
8. Peng, Fu-Wang *et al.* (2007) *Protein Expression and Purification* **53**:356.