

Datasheet: PBP007A

**BATCH NUMBER 167142**

<b>Description:</b>	RECOMBINANT BOVINE INTERFERON GAMMA
<b>Name:</b>	IFN GAMMA
<b>Other names:</b>	INTERFERON GAMMA
<b>Format:</b>	Rec. Protein
<b>Product Type:</b>	Recombinant Protein
<b>Quantity:</b>	25 µg

## Product Details

### Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
ELISA	▪			
Functional Assays	▪			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

<b>Target Species</b>	Bovine
<b>Product Form</b>	Purified recombinant protein - lyophilized
<b>Reconstitution</b>	Reconstitute with 100 µl sterile PBS containing 0.1% carrier protein Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. Bio-Rad recommend that the vial is gently mixed after reconstitution.
<b>Preparation</b>	Recombinant protein expressed in <i>Pichia pastoris</i> and purified by ion-exchange chromatography
<b>Source</b>	<i>Pichia pastoris</i>
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	10% Trehalose

**External Database  
Links**

**UniProt:**

[P07353](#)   [Related reagents](#)

**Entrez Gene:**

[281237](#) IFNG   [Related reagents](#)

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**Product Information**   **Recombinant Bovine interferon gamma**, (IFN $\gamma$ ), known previously as macrophage activating factor, belongs to the type II interferon family and is produced by T lymphocytes and NK cells.

Native bovine interferon gamma is a 143 amino acid cytokine with potent activating, anti-viral and anti-proliferative properties. It is produced as a pro-peptide with an additional 23 amino acid N-terminal signal peptide sequence having a molecular weight of ~20 kDa.

IFN $\gamma$  is predominantly secreted by activated T lymphocytes in response to specific mitogens as a result of infection and has numerous immunological regulatory functions. Properties include macrophage activation, upregulation of MHC class I and II molecules on various cells and induction of cytotoxicity.

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**Protein Molecular Weight**   16.9 kDa

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**Purity**   >95% by SDS PAGE analysis

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**ELISA**   This reagent has been used as a standard in a sandwich ELISA assay in conjunction with clone CC330 ([MCA2112](#)) and clone CC302 ([MCA1783B](#))

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- References**
1. Floss, M.M. *et al.* (2010) Expression and Immunogenicity of the Mycobacterial Ag85B/ESAT-6 Antigens Produced in Transgenic Plants by Elastin-Like Peptide Fusion Strategy. [J Biomed Biotechnol. 2010: 274346.](#)
  2. Korzekwa, A.J. *et al.* (2011) Characterization of bovine immortalized luteal endothelial cells: action of cytokines on production and content of arachidonic acid metabolites. [Reprod Biol Endocrinol. 9: 27.](#)
  3. Pujol, J. *et al.* (2015) Generation of a soluble recombinant trimeric form of bovine CD40L and its potential use as a vaccine adjuvant in cows. [Vet Immunol Immunopathol. 168 \(1-2\): 1-13.](#)
  4. Soria, I. *et al.* (2018) Immune Response and Partial Protection against Heterologous Foot-and-Mouth Disease Virus Induced by Dendrimer Peptides in Cattle. [J Immunol Res. 2018: 3497401.](#)
  5. Hecker, Y.P. *et al.* (2019) Immune response to *Neospora caninum* live tachyzoites in prepubertal female calves. [Parasitol Res. 118 \(10\): 2945-55.](#)
  6. Rodrigues, V. *et al.* (2017) Development of a bead-based multiplexed assay for simultaneous quantification of five bovine cytokines by flow cytometry. [Cytometry A. 91 \(9\): 901-907.](#)
  7. Fiorani, F. *et al.* (2019) Delayed type hypersensitivity induced by intradermal inoculation of a *Neospora caninum*. tachyzoite antigen in previously exposed cattle. [Vet Immunol Immunopathol. 207: 31-5.](#)

8. Soria, I. *et al.* (2017) Dendrimeric peptides can confer protection against foot-and-mouth disease virus in cattle. [PLoS One. 12 \(9\): e0185184.](#)
9. Kornuta, C.A. *et al.* (2022) TLR activation, immune response and viral protection elicited in cattle by a commercial vaccine against Bovine Herpesvirus-1. [Virology. 566: 98-105.](#)
10. Bouroutzika, E. *et al.* (2023) Melatonin Administration to Pregnant Ewes for Coccidiosis Control in Their Offspring. [Animals \(Basel\). 13 \(14\): 2381.](#)
11. Hashem, Z. *et al.* (2023) Development, Preparation and Evaluation of a Murine Monoclonal Antibodies-Based Interferon-Gamma Enzyme-Linked Immunosorbent Assay (ELISA) for Rapid and Accurate Diagnosis of Bovine Tuberculosis [Int J Vet Sci. 12 \(4\): 599-606.](#)
12. Lybeck, K. *et al.* (2024) Selection of vaccine-candidate peptides from *Mycobacterium avium* subsp. *paratuberculosis* by *in silico* prediction, *in vitro* T-cell line proliferation, and *in vivo* immunogenicity. [Front Immunol. 15: 1297955.](#)

<b>Storage</b>	Prior to reconstitution store at +4°C. After reconstitution store at -20°C. Storage in frost-free freezers is not recommended. This product should be stored undiluted.
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10591 available at: <a href="https://www.bio-rad-antibodies.com/SDS/PBP007A">https://www.bio-rad-antibodies.com/SDS/PBP007A</a> 10591
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Useful Reagents

[MOUSE ANTI BOVINE INTERFERON GAMMA:Biotin \(MCA1783B\)](#)

[MOUSE ANTI BOVINE INTERFERON GAMMA \(MCA2112\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)  
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