Datasheet: PBP007A

BATCH NUMBER 172248

Description:	RECOMBINANT BOVINE INTERFERON GAMMA
Name:	IFN GAMMA
Other names:	INTERFERON GAMMA
Format:	Rec. Protein
Product Type:	Recombinant Protein
Quantity:	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.

	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.

Target Species

Bovine

Product Form

Purified recombinant protein - lyophilized

Reconstitution

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.

Preparation

Recombinant protein expressed in *Pichia pastoris* and purified by ion-exchange chromatography

Source

Pichia pastoris

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

10% Trehalose

External Database Links	**UniProt:** P07353 Related reagents **Entrez Gene:** 281237 IFNG Related reagents
Product Information	**Recombinant Bovine interferon gamma**, (IFNγ), 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. IFNγ 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.
Protein Molecular Weight	16.9 kDa
Purity	>95% by SDS PAGE analysis
ELISA	This reagent has been used as a standard in a sandwich ELISA assay in conjunction with clone CC330 (MCA2112) and clone CC302 (MCA1783B)
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.

Storage	This product is shipped at ambient temperature. 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.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10591 available at: https://www.bio-rad-antibodies.com/SDS/PBP007A
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

MOUSE ANTI BOVINE INTERFERON GAMMA:Biotin (MCA1783B)
MOUSE ANTI BOVINE INTERFERON GAMMA (MCA2112)

Product inquiries: www.bio-rad-antibodies.com/technical-support

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M441555:250523'

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