

Datasheet: PBP015KZZ

BATCH NUMBER 171958

Description:	BOVINE DENDRITIC CELL GROWTH KIT
Name:	BOVINE DENDRITIC CELL GROWTH KIT
Format:	Kit
Product Type:	Kits
Quantity:	5 ml

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
Functional Assays	▪			1:20

Where this reagent 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 protein for use in their own system using appropriate negative/positive controls.

Target Species	Bovine
Product Form	Mixed recombinant bovine Interleukin-4 and bovine GM-CSF – supplied as a liquid
Preparation	Recombinant cytokines expressed in mammalian Chinese Hamster Ovary (CHO) cells using the pEE14® vector grown in antibiotic free media and USDA-approved dialysed FCS which has been screened for BVDV and virus growth by PCR.
Preservative Stabilisers	None present
Endotoxin Level	< 0.5 EU/ml
Product Information	Bovine dendritic cell growth kit contains a cocktail of biologically active interleukin-4 (IL-4) and granulocyte/macrophage-colony stimulating factor (GM-CSF) that have been premixed at optimal concentrations to induce dendritic cell development from peripheral blood-derived bovine (cattle) monocytes.
Instructions For Use	1. Prepare peripheral blood mononuclear cells (PBMC) from heparinised blood by density gradient centrifugation.

2. Purify CD14⁺ cells by labelling PBMC with CD14 mAb and utilise magnetic bead or flow cytometric separation techniques.
3. Resuspend the isolated CD14⁺ cells at a concentration of 1x10⁶ cells/ml in tissue culture medium (TCM = RPMI or equivalent + 10% foetal calf serum) containing a final dilution of 1:20 of PBP015KZZ .
4. Add 3ml of cell suspension to each well of a 6 well tissue culture plate.
5. Culture cells in a humidified atmosphere of 5% CO₂ in air, at approximately 37°C.
6. Culture cells for 3 days. The cells may then be harvested and used for other procedures including immunophenotyping (as required).
7. If a longer culture period is required the cells must be 'fed' with new TCM containing cytokines on day 3:
Carefully remove 1ml spent medium from each well, care is required to avoid disturbing the cells.
Add 1.5ml fresh, pre-warmed TCM containing cytokines at 1:20 to each well and re-culture the DC for required culture period (typically up to 7 days).
8. At the end of the culture period adherent and non-adherent cells can be pooled for use in immunoassays and phenotyped (as required). Adherent cells may require a dissociation step to remove them from the plate.

References

1. Walters, A.A. *et al.* (2015) Assessment of the enhancement of PLGA nanoparticle uptake by dendritic cells through the addition of natural receptor ligands and monoclonal antibody. [Vaccine. 33 \(48\): 6588-95.](#)

Further Reading

1. Werling, D. *et al.* (1999) Involvement of caveolae in the uptake of respiratory syncytial virus antigen by dendritic cells. [J Leukoc Biol. 66 \(1\): 50-8.](#)
2. Hope, J.C. *et al.* (2000) Dendritic cells induce CD4+ and CD8+ T-cell responses to *Mycobacterium bovis* and *M. avium* antigens in *Bacille Calmette Guérin* vaccinated and nonvaccinated cattle. [Scand J Immunol. 52 \(3\): 285-91.](#)

Storage

Store at -20°C only.
Storage in frost-free freezers is not recommended.
This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature this recombinant protein. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee

6 months from date of despatch

Acknowledgements

This reagent was produced as part of the BBSRC/SEERAD Immunological Toolbox. The kit development was also supported by the European Community's Seventh Framework Programme (FP7, 2007-2013), Research Infrastructures action, under the grant agreement No. FP7-228394 (NADIR)

Health And Safety Information Material Safety Datasheet documentation #10286 available at:
<https://www.bio-rad-antibodies.com/SDS/PBP015KZZ>

Regulatory For research purposes only

Related Products

Recommended Useful Reagents

[MOUSE ANTI BOVINE CD14:FITC \(MCA2678F\)](#)

[MOUSE ANTI HUMAN CD14:Low Endotoxin \(MCA1568EL\)](#)

[MOUSE ANTI HUMAN CD14:Alexa Fluor® 647 \(MCA1568A647\)](#)

[MOUSE ANTI HUMAN CD14:Biotin \(MCA1568B\)](#)

[MOUSE ANTI HUMAN CD14:FITC \(MCA1568F\)](#)

[MOUSE ANTI HUMAN CD14:Pacific Blue® \(MCA1568PB\)](#)

[MOUSE ANTI HUMAN CD14:RPE \(MCA1568PE\)](#)

[MOUSE ANTI HUMAN CD14:Alexa Fluor® 700 \(MCA1568A700\)](#)

[MOUSE ANTI BOVINE MHC CLASS II DQ \(MCA5655\)](#)

[MOUSE ANTI BOVINE MHC CLASS II DR \(MCA5656\)](#)

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

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