

Datasheet: PBP014KZZ

Description:	BOVINE DENDRITIC CELL GROWTH KIT
Name:	BOVINE DENDRITIC CELL GROWTH KIT
Format:	Kit
Product Type:	Kits
Quantity:	1 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 reagent 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	<0.5EU/mL
Product Information	Bovine Dendritic cell growth kit (PBP014KZZ) 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	<ol style="list-style-type: none"> 1. Prepare peripheral blood mononuclear cells (PBMC) from heparinised blood by density gradient centrifugation. 2. Purify CD14^{+ve} cells by labelling PBMC with CD14 mAb and utilise magnetic bead or flow cytometric separation techniques. 3. Resuspend the isolated CD14^{+ve} 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 PBP014KZZ .

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. 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](#)
2. Myster, F. *et al.* (2015) Viral semaphorin inhibits dendritic cell phagocytosis and migration but is not essential for gammaherpesvirus-induced lymphoproliferation in malignant catarrhal fever. [J Virol. 89 \(7\): 3630-47.](#)
3. Corripio-Miyar, Y. *et al.* (2017) 1,25-Dihydroxyvitamin D3 modulates the phenotype and function of Monocyte derived dendritic cells in cattle [BMC Veterinary Research. 13 \(1\) \[Epub ahead of print\].](#)

Further Reading

1. Werling, D. et al (1999) Involvement of caveolae in the uptake of respiratory syncytial virus antigen by dendritic cells [Journal of Leukocyte Biology 66: 50-8](#)

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:
10286: <https://www.bio-rad-antibodies.com/uploads/MSDS/10286.pdf>

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 HUMAN CD14:RPE-Alexa Fluor® 647 \(MCA1568P647\)](#)
[MOUSE ANTI BOVINE MHC CLASS II DQ \(MCA5655\)](#)
[MOUSE ANTI BOVINE MHC CLASS II DR \(MCA5656\)](#)
[MOUSE ANTI BOVINE CD1w2 \(MCA831G\)](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	Worldwide	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
----------------------------------	---	------------------	---	---------------	---

'M347822:190214'

Printed on 20 May 2019

© 2019 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)