Datasheet: MCA1998S

**Description:** MOUSE ANTI DOG CD4

**Specificity:** CD4

**Format:** S/N

**Product Type:** Monoclonal Antibody

**Clone:** CA13.1E4

**Isotype:** IgG1

**Quantity:** 2 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](http://www.bio-rad-antibodies.com/protocols).

<table>
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<tr>
<th>Application</th>
<th>Yes</th>
<th>No</th>
<th>Not Determined</th>
<th>Suggested Dilution</th>
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<tbody>
<tr>
<td>Flow Cytometry</td>
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<td>Neat</td>
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<td>Immunohistology - Frozen</td>
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<tr>
<td>Immunohistology - Paraffin</td>
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<td>ELISA</td>
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<td>Immunoprecipitation</td>
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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**

Dog

**Product Form**

Tissue culture supernatant - liquid

**Preservative Stabilisers**

< 0.1% sodium azide (NaN<sub>3</sub>)

**Immunogen**

Canine Thymocytes

### External Database Links

**UniProt:**

P33705  Related reagents

**Entrez Gene:**

403931  CD4  Related reagents
Spleen cells from immunised Balb/c mice were fused with cells of the P3X63-Ag.653 mouse myeloma cell line.

**Specificity**

**Mouse anti Dog CD4 antibody (CA13.1E4)**, a monoclonal antibody specific for canine CD4. CA13.1E4 was clustered at the first Canine Leukocyte Antigen Workshop (Claw) [Cobbold et al. 1992] and identifies, by immunoprecipitation a ~60 kDa monomeric protein under both reducing and non-reducing conditions. Canine CD4 is a surface glycoprotein expressed by non CD8 expressing T lymphocytes, with similar developmental and functional characteristics to T helper cells described in other mammalian species. Mouse anti Dog CD4 also recognizes a population of CD8 positive cells in the canine thymus (Moore et al. 1992).

CD4 expression has also been reported on a population of CD3 positive peripheral blood T lymphocytes which are double positive for CD4 and CD8 (Bismarck et al. 2012). Similar reports have been made for cynomolgus monkey (Nam et al. 2000), pig (Saalmuller et al. 1987, Pescowitz et al. 1990) as well as rat, chicken and human (reviewed Zuckermann 1999).

Uniquely amongst mammalian species clone CA13.1E4 also recognizes CD4 expressed on canine neutrophils at a similar density to that expressed on canine T helper cells. The functional significance of this is not understood and remains enigmatic in view of the roles described for CD4 in canine and other mammalian species (Moore et al. 1992).

Clone CA13.1E4 also demonstrates immunohistological staining of splenic marginal zone macrophages (Moore et al. 1992). Other macrophage populations, such as splenic red pulp macrophages and Langerhans cells do not stain with clone CA13.1E4. Canine CD4 positive T cells can be further characterized according to their simultaneous expression of CD45RA as recognized by Rat anti Canine anti CD45RA clone CA4.1D3 in a manner analogous to that seen with human T cells (Moore et al. 1992).

Clone CA13.1E4 has been used amongst a large panel of anti-canine monoclonal antibodies for the study of various lymphoproliferative diseases. T lymphocytes in large granular lymphocyte (LGL) lymphocytosis are negative for CD4 (McDonough and Moore 2000). Dogs with chronic myelogenous leukemia demonstrate CD4 positive staining on neutrophils (Tarrant et al. 2001). CD4 expression varies considerably between various canine leukemias.

**Flow Cytometry**

Use 25μl of the suggested working dilution to label 10⁶ cells or 100μl whole blood

**Histology Positive Control Tissue**

Canine spleen or lymph node

**References**


14. Troupel, T. et al. (2022) Generalised idiopathic polymyositis mimicking masticatory myositis in a dog Veterinary Record Case Reports. 10 (4) e452.

Storage

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

Guarantee

12 months from date of despatch

Health And Safety Information


Regulatory

For research purposes only
Related Products

**Recommended Secondary Antibodies**

- Goat Anti Mouse IgG (STAR77...) **HRP**
- Rabbit Anti Mouse IgG (STAR12...) **RPE**
- Goat Anti Mouse IgG (STAR70...) **FITC**
- Goat Anti Mouse IgG IgA IgM (STAR87...) **Alk. Phos., HRP**
- Goat Anti Mouse IgG (STAR76...) **RPE**
- Goat Anti Mouse IgG (Fc) (STAR120...) **FITC, HRP**
- Rabbit Anti Mouse IgG (STAR13...) **HRP**
- Rabbit Anti Mouse IgG (STAR9...) **FITC**
- Goat Anti Mouse IgG (H/L) (STAR117...) **Alk. Phos., DyLight®488, DyLight®550, DyLight®650, DyLight®680, DyLight®800, FITC, HRP**

**Recommended Negative Controls**

**MOUSE IgG1 NEGATIVE CONTROL (MCA928)**

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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](http://bio-rad-antibodies.com/datasheets)

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