



Anti-CD4 monoclonal antibody, clone CA13.1E4 (CABT-45074MD)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview

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) and identifies, by immunoprecipitation a 60kDa 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. CD4 expression has also been reported on a population of CD3 positive peripheral blood T lymphocytes which are double positive for CD4 and CD8. Similar reports have been made for cynomolgus monkey, pig as well as rat, chicken and human. 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. Clone CA13.1E4 also demonstrates immunohistological staining of splenic marginal zone macrophages. 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. 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. Dogs with chronic myelogenous leukemia demonstrate CD4 positive staining on neutrophils. CD4 expression varies considerably between various canine leukemias. Flow Cytometry Use 25ul of the suggested working dilution to label 106 cells or 100ul whole blood.

Specificity

CD4

Immunogen

Canine Thymocytes

Isotype	IgG1
Source/Host	Mouse
Species Reactivity	Dog
Clone	CA13.1E4
Conjugate	Unconjugated
Applications	IHC-Fr; FC; IP
Format	Tissue Culture Supernatant - liquid
Size	2 ml
Preservative	0.09% Sodium Azide
Storage	in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

GENE INFORMATION

Gene Name	CD4 CD4 molecule [Canis lupus familiaris (dog)]
Official Symbol	CD4
Synonyms	CD4; T-cell surface glycoprotein CD4; CD4 antigen (p55); T-cell surface antigen T4/Leu-3;
Entrez Gene ID	403931
Protein Refseq	NP_001003252
UniProt ID	P33705
Chromosome Location	chromosome: 27
Pathway	Antigen processing and presentation; Cell adhesion molecules (CAMs); Cytokines and Inflammatory Response; Hematopoietic cell lineage; Primary immunodeficiency; T cell receptor signaling pathway;
Function	coreceptor activity;