



Anti-CD4 monoclonal antibody, clone SQB-U5 [Pacific Blue™] (CABT-45094MH)

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

PRODUCT INFORMATION

Antigen Description	This gene encodes a membrane glycoprotein of T lymphocytes that interacts with major histocompatibility complex class II antigens and is also a receptor for the human immunodeficiency virus. This gene is expressed not only in T lymphocytes, but also in B cells, macrophages, and granulocytes. It is also expressed in specific regions of the brain. The protein functions to initiate or augment the early phase of T-cell activation, and may function as an important mediator of indirect neuronal damage in infectious and immune-mediated diseases of the central nervous system. Multiple alternatively spliced transcript variants encoding different isoforms have been identified in this gene. [provided by RefSeq, Aug 2010]
Specificity	<p>Mouse anti human CD4 antibody, clone SQB-U5 recognizes human CD4, a 55kD cell surface glycoprotein that is primarily expressed on a subpopulation of T lymphocytes, on peripheral blood monocytes and on tissue macrophages. Epitope mapping studies have shown that antibodies, produced by clone SQB-U5, recognize an epitope within domain 1, of the extracellular region, of the CD4 molecule.</p> <p>Mouse anti human CD4 antibody, clone SQB-U5 has been reported to block gp120-CD4 interaction and inhibit syncytium formation. CD recommend the use of Mouse anti Human CD4: Low Endotoxin for this purpose.</p>
Immunogen	Human PHA blasts.
Isotype	IgG1
Source/Host	Mouse
Species Reactivity	Human
Clone	SQB-U5
Conjugate	Pacific Blue

Applications	Flow Cytometry
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant.
Format	Purified IgG conjugated to Pacific Blue? - liquid.
Concentration	IgG concentration 0.05 mg/ml.
Size	25 tests
Buffer	Phosphate buffered saline.
Preservative	0.09% Sodium Azide
Storage	<p>Store at +4°C or at -20°C if preferred.</p> <p>This product should be stored undiluted.</p> <p>Storage in frost free freezers is not recommended. This product is photosensitive and should be protected from light.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.</p>

GENE INFORMATION

Gene Name	CD4 CD4 molecule [Homo sapiens (human)]
Official Symbol	CD4
Synonyms	CD4; CD4 molecule; CD4mut; T-cell surface glycoprotein CD4; CD4 receptor; CD4 antigen (p55); T-cell surface antigen T4/Leu-3
Entrez Gene ID	920
Protein Refseq	NP_000607
UniProt ID	B4DT49
Chromosome Location	12p13.31
Pathway	Adaptive Immune System; Alpha-defensins; Antigen processing and presentation; Arf1 pathway; Binding and entry of HIV virion; C-MYB transcription factor network; CXCR4-mediated signaling events; Cell adhesion molecules (CAMs); Costimulation by the CD28 family; Cytokines and Inflammatory Response; Defensins; Disease; Downstream TCR signaling; Early Phase of HIV Life Cycle; Generation of second messenger molecules; HIV Infection; HIV Life Cycle; Hematopoietic cell lineage; Host Interactions of HIV
Function	MHC class II protein binding; coreceptor activity; enzyme binding; extracellular matrix structural

constituent; glycoprotein binding; protein binding; protein homodimerization activity; protein kinase binding; receptor activity; transmembrane signaling receptor activity; zinc ion binding

References

1. Zarkesh-Esfahani, H. et al. (2001) High-dose leptin activates human leukocytes via receptor expression on monocytes. *J. Immunol.*167:4593 – 4599.
 2. Voehringer, D. et al. (2002) Lack of proliferative capacity of human effector and memory T cells expressing killer cell lectin-like receptor G1 (KLRG1). *Blood.*100: 3698 - 3702.
 3. Piatier-Tonneau, D. (1997) CD4 workshop panel report. In *Leucocyte Typing VI. White cell differentiation antigens*. Edited by Kishimoto, T., Kikutani, H., von dem Borne, A.E.G.Kr., Goyert, A.M., Mason, D.Y., Miyasaka, M., Moretta, L., Okumura, K., Shaw, S., Springer, T.A., Sugamura, K., Zola, H. Garland publishing Inc. New York & London.
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