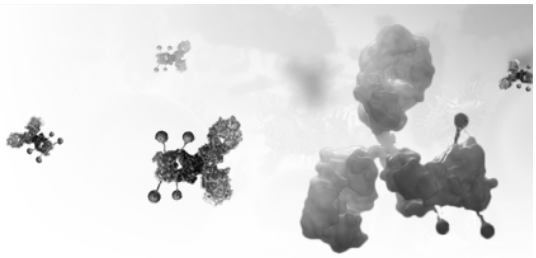

Syrian Hamster Anti-Mouse CTLA-4 (CD152) Monoclonal antibody, clone 9H10 (CABT-L4321)

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

PRODUCT INFORMATION

Product Overview	The 9H10 monoclonal antibody reacts with mouse CTLA-4 (cytotoxic T lymphocyte antigen-4) also known as CD152. CTLA-4 is a 33 kDa cell surface receptor encoded by the Ctla4 gene that belongs to the CD28 family of the Ig superfamily. CTLA-4 is expressed on activated T and B lymphocytes. CTLA-4 is structurally similar to the T-cell co-stimulatory protein, CD28, and both molecules bind to the B7 family members B7-1 (CD80) and B7-2 (CD86). Upon ligand binding, CTLA-4 negatively regulates cell-mediated immune responses. CTLA-4 plays roles in induction and/or maintenance of immunological tolerance, thymocyte development, and regulation of protective immunity. The critical role of CTLA-4 in immune down-regulation has been demonstrated in CTLA-4 deficient mice, which succumb at 3-5 weeks of age due to the development of a lymphoproliferative disease. CTLA-4 is among a group of inhibitory receptors being explored as cancer treatment targets through immune checkpoint blockade. The 9H10 antibody has been shown to promote T cell co-stimulation by blocking CTLA-4 binding to the B7 co-receptors, allowing for CD28 binding.
Target	Mouse CTLA-4 (CD152)
Immunogen	Mouse CTLA-4-human IgG1 fusion protein
Isotype	IgG
Source/Host	Syrian Hamster
Species Reactivity	Mouse
Clone	9H10
Purification	Protein G purified. Purity>95%. Determined by SDS-PAGE

45-1 Ramsey Road, Shirley, NY 11967, USA
Email: info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221

Conjugate	Functional Grade
Applications	in vivo CTLA-4 neutralization, in vitro CTLA-4 neutralization, WB
Molecular Weight	150 kDa
Format	0.2 μM filtered liquid. Purified from tissue culture supernatant in an animal free facility
Concentration	Lot specific
Size	5 mg
Buffer	PBS, pH 7.0. Contains no stabilizers or preservatives. [low endotoxin azide-free] Endotoxin level: <1EU/mg (<0.001EU/μg). Determined by LAL gel clotting assay Related dilution buffer: CABT-LB04
Preservative	None
Storage	The antibody solution should be stored undiluted at 4°C, and protected from prolonged exposure to light. Do not freeze.
Ship	Wet ice

BACKGROUND

Introduction	This gene is a member of the immunoglobulin superfamily and encodes a protein which transmits an inhibitory signal to T cells. The protein contains a V domain, a transmembrane domain, and a cytoplasmic tail. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. The membrane-bound isoform functions as a homodimer interconnected by a disulfide bond, while the soluble isoform functions as a monomer. Mutations in this gene have been associated with insulin-dependent diabetes mellitus, Graves disease, Hashimoto thyroiditis, celiac disease, systemic lupus erythematosus, thyroid-associated orbitopathy, and other autoimmune diseases.
Keywords	CTLA-4

GENE INFORMATION

Official Symbol	cytotoxic T-lymphocyte-associated protein 4
Synonyms	CTLA-4
References	Ariyan, C. E., et al. (2018). "Robust Antitumor Responses Result from Local Chemotherapy and CTLA-4 Blockade." Cancer Immunol Res 6(2): 189-200. PubMed;Hervieu, A., et al. (2013).

45-1 Ramsey Road, Shirley, NY 11967, USA
Email: info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221

"Dacarbazine-mediated upregulation of NKG2D ligands on tumor cells activates NK and CD8 T cells and restrains melanoma growth." J Invest Dermatol 133(2): 499-508. PubMed;Waitz, R., et al. (2012). "Potent induction of tumor immunity by combining tumor cryoablation with anti-CTLA-4 therapy." Cancer Res 72(2): 430-439. PubMed;Balachandran, V. P., et al. (2011). "Imatinib potentiates antitumor T cell responses in gastrointestinal stromal tumor through the inhibition of Ido." Nat Med 17(9): 1094-1100. PubMed;Pedicord, V. A., et al. (2011). "Single dose of anti-CTLA-4 enhances CD8+ T-cell memory formation, function, and maintenance." Proc Natl Acad Sci U S A 108(1): 266-271. PubMed

45-1 Ramsey Road, Shirley, NY 11967, USA
Email: info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221