OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for TA386148

Ctla4 Monoclonal Antibody [Clone ID: 9H10]

Product data:

Product Type:	Primary Antibodies
Clone Name:	9H10
Applications:	Bl, ELISA, FC, Neutralize, WB
Reactivity:	Mouse
Isotype:	IgG, kappa
Clonality:	Monoclonal
Immunogen:	This antibody was raised by immunising Syrian hamsters with Staphylococcus A bacteria coated in CTLA-4, isolating B cells from the immunised hamsters and fusing these with the P3X3.Ag8.653 myeloma line to produce stable hybridomas.

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Specificity:	This antibody is specific for murine CTLA-4, an inhibitory receptor that acts as the primary negative regulator of T-cell responses. CTLA-4 is expressed predominantly by activated T cells, with significantly higher levels of expression on CD8+ T cells than CD4+ T cells. CTLA-4 is upregulated on T cells following their activation, and acts as a negative regulator of T cell responses; CTLA-4 binds to the B7 molecules CD80 and 86, resulting in the delivery of an inhibitory signal, and consequent downregulation of T cell-mediated immunity. Administration of 9H10 blocks the interaction between CTLA-4 on the T cell surface and CD80 and CD86. This promotes the activation of effector T cells and stimulates the immune response raised against weak antigens, including tumour antigens. While this antibody alone does not enhance T cell proliferation, it does significantly increase T cell proliferation when administered together with anti-CD28 (clone 37.51) (Krummel & Allison, 1995), anti-OX40 and anti-GITR (Houot & Levy, 2009). Blocking CTLA-4 induces T cell anti-tumour immunity in animal models, both by suppressing regulatory T cell activity and directly promoting CD8+ T cell effector function (Peggs et al, 2009). In transgenic murine models of prostate cancer, the use of a CTLA-4 blockade in conjunction with an irradiated tumour cell vaccine stimulates an immune response against primary tumours, and results in a significant reduction in tumour incidence (Hurwitz et al, 2000). Similarly, in murine melanoma models, CTLA-4 blockage, in combination with CD40 stimulation and adenoviral vaccination, can elicit complete regression (Sorensen et al, 2010). In murine models of pancreatic ductal adenocarcinoma, 9H10 has also been shown to induce T cell-dependent tumour regressions (Vonderheide et al, 2015). Priming the T cell response with CD40 mAbs or chemotherapy reversed the resistance to 9H10 and RMP1-14 observed in well-established tumours. Additionally, this antibody has been used to detect CTLA-4 using ELISA (Krummel & Allison, 1995) and to stain CTLA-4-expressing cells (Deeths et al, 1999).
Formulation:	PBS with 0.02% Proclin 300.
Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Please store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C. Avoid freeze and thaw cycles.
Stability:	3 years from dispatch.
Gene Name:	cytotoxic T-lymphocyte-associated protein 4
Database Link:	Entrez Gene 12477 Mouse P09793
Synonyms:	CD; CD28; CD152; CELIAC3; CTLA-4; GRD4; GSE; ICOS; IDDM12