Anti-CTLA-4 [9H10] Standard Size Ab00894-22.0

Isotype and Format: Hamster (Armenian) IgG, Kappa
Clone Number: 9H10
Alternative Name(s) of Target: CD152; CTLA4; cytotoxic T-lymphocyte-associated antigen 4; Cytotoxic T-lymphocyte protein 4;
UniProt Accession Number of Target Protein: P09793
Published Application(s): Neutralisation, proliferation assays, WB, ELISA, FC
Published Species Reactivity: Mouse
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.
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.
Application Notes: 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).
Antibody First Published in: Krummel & Allison CD28 and CTLA-4 Have Opposing Effects on the

Response of T cells to Stimulation J Exp Med. 1995 Aug 1; 182(2): 459–465. PMID:7543139
Note on publication: Describes the original generation and characterisation of this antibody.

Product Form

Size: 200 µg Purified antibody.
Purification: Protein A affinity purified
Supplied In: PBS with 0.02% Proclin 300.
Storage Recommendation: Store at 4ºC for up to 3 months. For longer storage, aliquot and store at -20ºC.
Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.