Human CTLA-4 Alexa Fluor® 532-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 48815

Catalog Number: FAB325X

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CTLA-4 in direct ELISAs and Western blots. Shows approximately 10% cross-reactivity with recombinant mouse CTLA-4 and no cross-reactivity with recombinant human (rh) CD28 or rhICOS.
Source	Monoclonal Mouse IgG_{2B} Clone # 48815
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human CTLA-4 Ala37-Phe162 (Thr174Ala) Accession # Q6GR94
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

CTLA-4 and CD28, together with their ligands B7-1 and B7-2, constitute one of the dominant costimulatory pathways that regulate T- and B-cell responses. CTLA-4 and CD28 are structurally homologous molecules that are members of the immunoglobulin (Ig) gene superfamily. Both CTLA-4 and CD28 are composed of a single Ig V-like extracellular domain, a transmembrane domain and an intracellular domain. CTLA-4 and CD28 are both expressed on the cell surface as disulfide-linked homodimers or as monomers. The genes encoding these two molecules are closely linked on human chromosome 2. CTLA-4 was originally identified as a gene that was specifically expressed by cytotoxic T lymphocytes. However, CTLA-4 transcripts have since been found in both Th1 and Th2, and $CD4^+$ and $CD8^+$ T cell clones. Whereas CD28 expression is constitutive on the surfaces of 95% of $CD4^+$ T cells and 50% of $CD8^+$ T cells and is down regulated upon T cell activation, CTLA-4 expression is upregulated rapidly following T cell activation and peaks approximately 24 hours following activation. Although both CTLA-4 and CD28 can bind to the same ligands, CTLA-4 binds to B7-1 and B7-2 with 20-100-fold higher affinity than CD28. The physiological role of CTLA-4 in T cell costimulation is currently being studied. Recombinant human CTLA-4 Fc chimera preparations produced at R&D Systems have been shown to bind both B7-1 and B7-2 with high affinity and to inhibit CD 28 signalling competitively.

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