**DESCRIPTION**

**Species Reactivity**
Human

**Specificity**
Detects human CTLA-4 in direct ELISAs and Western blots. In Western blots, approximately 25% cross-reactivity with recombinant mouse CTLA-4 is observed.

**Source**
Polyclonal Goat IgG

**Purification**
Antigen Affinity-purified

**Immunogen**
*S. frugiperda* insect ovarian cell line Sf21-derived recombinant human CTLA-4

**Conjugate**
Phycoerythrin

**Excitation Wavelength:** 488 nm

**Emission Wavelength:** 565-605 nm

**Formulation**
Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.

*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**

**Flow Cytometry**
10 µL/10^6 cells

**Recommended Concentration**
See Below

**DATA**

Detection of CTLA-4 in NS0 Mouse Cell Line Transfected with Human CTLA-4 and eGFP by Flow Cytometry. NS0 mouse myeloma cell line transfected with human CTLA-4 and eGFP was stained with (A) Goat Anti-Human CTLA-4 PE-conjugated Antibody (Catalog # FAB386P) and (B) Normal Goat IgG Phycoerythrin Control (Catalog # IC108P). View our protocol for Staining Membrane-associated Proteins.

**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.

**References:**