Rat B7-2/CD86 Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 199602

Catalog Number: FAB1340T

100 µg

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat B7-2/CD86 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse (rm) B7-1, recombinant rat B7-1, rmB7-2, rmB7-H1, rmB7-H2, rmB7-H3, or rmPD-L2 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 199602
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant rat B7-2/CD86 Val29-Ile250 Accession # NP_064466
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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

For optimal T cell expansion and activation, a signal induced by the engagement of the T cell receptor and a co-stimulatory signal(s) through distinct T cell surface molecules are required. Members of the B7 superfamily of counter-receptors were identified by their ability to interact with co-stimulatory molecules found on the surface of T cells. Members of the B7 superfamily are type I membrane proteins and include B7-1 (CD80), B7-2 (CD86), B7-H1 (PD-L1), B7-H2 (B7RP-1), B7-H3, and PD-L2 (1). B7-2 is expressed constitutively at low levels on most antigen presenting cells (APC) and is rapidly upregulated upon cell activation (2). T cells express two different receptors (CD28 and CTLA-4) capable of binding both B7-1 and B7-2 (2). B7-2 binds to CD28 with the low affinity but binds to CTLA-4 with intermediate affinity. In contrast, B7-1 binds CD28 with intermediate affinity and CTLA-4 with high affinity. Additionally, these molecules have different kinetics for binding CD28 and CTLA-4 with B7-2 having a higher-binding dissociation kinetics (1). Engagement of CD28 by B7-2 increases T cell proliferation and IL-2, IL-4, and IFN-γ production, thereby enhancing the immune response (3). In contrast, engagement of CTLA-4 is involved in the down-regulation of the immune response (4). Rat B7-2 cDNA encodes a 313 amino acid (aa) precursor protein containing a an extracellular domain, a transmembrane domain, and a cytoplasmic domain. Rat and human B7-1 share 54% aa identity.

PRODUCT SPECIFIC NOTICES

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