

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat B7-1/CD80 in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant mouse (rm) B7-1 is observed, 5% cross-reactivity with recombinant human B7-1 is observed, and less than 1%
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant rat B7-1/CD80 Ile39-Gln248 Accession # AAB60503
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 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.
Immunocytochemistry	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

It is widely accepted that T cells require a signal induced by the engagement of the T cell receptor and a "co-stimulatory" signal(s) through distinct T cell surface molecules for optimal T cell expansion and activation. 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 include B7-1 (CD80), B7-2 (CD86), B7-H1 (PD-L1), B7-H2 (B7RP-1), B7-H3 and PD-L2 (1). B7-1 is expressed on activated B cells, activated T cells, mature dendritic cells and macrophages (2). T cells express two different receptors capable of binding B7-1, CD28 and CTLA-4. CTLA-4 binds to B7-1 with a 20-100 fold higher affinity than CD28. Engagement of CD28 by B7-1 increases T cell proliferation and IL-2 production and enhances the immune response (3). In contrast, engagement of CTLA-4 is involved in the down-regulation of the immune response (4). Rat B7-1 is a 320 amino acid (aa) protein containing an extracellular domain, a transmembrane domain and a cytoplasmic domain. Rat and human B7-1 share 47% amino acid identity.

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