

PRODUCT INFORMATION



B7-1/CD80 Chimeric Monoclonal Antibody (Clone IDEC-114 (Galiximab)) Item No. 37164

Overview and Properties

Contents:	This vial contains 200 µg of protein A-affinity purified monoclonal antibody.
Synonyms:	Activation B7-1 Antigen, B7, B7-1, BB1, CD28LG, CD28LG1, CTLA-4 Counter-receptor B7.1, LAB7, T-lymphocyte Activation Antigen CD80
Immunogen:	Recombinant human B7-1/CD80
Cross Reactivity:	(+) CD80
Species Reactivity:	(+) Human
Uniprot No.:	P33681
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 0.02% ProClin™ 300
Clone:	IDEC-114 (Galiximab)
Host:	Chimeric Monoclonal Antibody
Isotype:	IgG1λ
Applications:	ELISA, Flow Cytometry (FC), Immunohistochemistry (IHC), Immunoprecipitation (IP), and Western blot (WB); the optimal working concentration/dilution should be determined empirically.

Description

CD80, also known as B7-1, is a glycoprotein and member of the CD28/B7 family of co-stimulatory receptors that promotes T cell activation.^{1,2} Alternative splicing of CD80 produces one full-length long isoform, CD80 long, and two short isoform, s1CD80 and s2CD80.² CD80 long exists as a membrane-bound dimer and is composed of an extracellular immunoglobulin variable (IgV) domain that interacts with the co-stimulatory molecule CD28 or the inhibitory molecule CTLA-4, as well as an immunoglobulin constant (IgC) domain and a cytoplasmic tail that are both required for T cell co-stimulation.¹ s1CD80 and s2CD80 lack the transmembrane domain or the transmembrane domain and the IgC domain, respectively, and are found in the serum.² CD80 is transiently expressed on the surface of antigen-presenting cells (APCs) and is upregulated following ligation of the co-stimulatory molecule CD86, as well as by pro-inflammatory stimuli, such as LPS, and downregulated by the anti-inflammatory cytokine IL-10.³⁻⁵ CD80 has two ligands, CD28 and CTLA-4, that compete for binding and are each expressed on naïve T cells but have opposing functions on T cell activation.⁶ CD80 binding to CD28 promotes T cell activation, survival, and cytokine production, whereas CD80 binding to CTLA-4 inhibits T cell activation and promotes T cell anergy. Neutralization of CD80 with a monoclonal antibody reduces the severity of synovitis and bone erosion, as well as CD4⁺ T cell infiltration, in the inflamed joints of a mouse model of arthritis induced by complete Freund's adjuvant (CFA) and BSA.⁷ Decreased CD80 tumor levels have been identified in patients with renal cell carcinoma.⁸ CD80 SNPs have been found in individuals with gastric cancer.⁹ Cayman's B7-1/CD80 Chimeric Monoclonal Antibody (Clone IDEC-114 (Galiximab)) was produced recombinantly from the original IDEC-114 antibody sequence and can be used for ELISA, flow cytometry (FC), immunohistochemistry (IHC), immunoprecipitation (IP), and Western blot (WB) applications and in functional assays.^{10,11} The IDEC-114 antibody was prepared by immunizing cynomolgus monkeys with recombinant CD80 antigen. The variable regions of the light and heavy chains were then cloned by incorporation into an N5LG1 cassette vector containing human constant region genes and subsequently transfected into the Dg44 CHO cell line.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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References

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