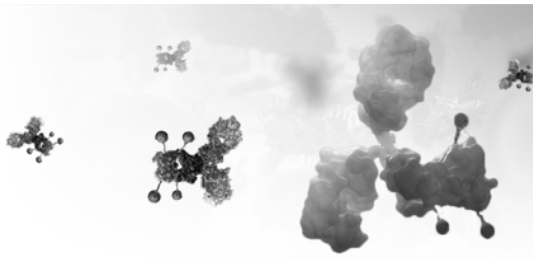

Rat Anti-Mouse IL-6 Monoclonal antibody, clone MP5-20F3 (CABT-L4377)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	The MP5-20F3 monoclonal antibody reacts with mouse IL-6 (interleukin-6) a 21-28 kDa cytokine that is expressed by many cell types, including T lymphocytes, B lymphocytes, monocytes, fibroblasts, and endothelial cells. IL-6 signals through a cell-surface type I cytokine receptor complex consisting of the ligand-binding IL-6Rα chain (CD126), and the signal-transducing component gp130 (also called CD130). Upon receptor binding IL-6 influences antigen-specific immune responses, inflammatory responses, neuronal development, and is a major mediator of the acute phase reaction. The MP5-20F3 monoclonal antibody has been shown to neutralize the bioactivity of natural or recombinant IL-6.
Target	Mouse IL-6
Immunogen	Recombinant mouse IL-6
Isotype	IgG1, κ
Source/Host	Rat
Species Reactivity	Mouse
Clone	MP5-20F3
Purification	Protein G purified. Purity>95%. Determined by SDS-PAGE
Conjugate	Functional Grade
Applications	in vivo IL-6 neutralization, in vitro IL-6 neutralization
Molecular Weight	150 kDa
Format	0.2 μM filtered liquid. Purified from tissue culture supernatant in an animal free facility

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Concentration	Lot specific
Size	5 mg
Buffer	PBS, pH 7.0. Contains no stabilizers or preservatives. [low endotoxin azide-free] Endotoxin level: <2EU/mg (<0.002EU/μg). Determined by LAL gel clotting assay Related dilution buffer: CABT-LB04
Preservative	None
Storage	The antibody solution should be stored undiluted at 4°C, and protected from prolonged exposure to light. Do not freeze.
Ship	Wet ice

BACKGROUND

Introduction	Interleukin-6 (IL-6) is an interleukin that acts as both a pro-inflammatory and anti-inflammatory cytokine. In humans, it is encoded by the IL6 gene. IL-6 is secreted by T cells and macrophages to stimulate immune response, e.g. during infection and after trauma, especially burns or other tissue damage leading to inflammation. IL-6 also plays a role in fighting infection, as IL-6 has been shown in mice to be required for resistance against bacterium Streptococcus pneumoniae. IL-6 is also considered a "myokine," a cytokine produced from muscle, and is elevated in response to muscle contraction. It is significantly elevated with exercise, and precedes the appearance of other cytokines in the circulation. During exercise, it is thought to act in a hormone-like manner to mobilize extracellular substrates and/or augment substrate delivery. Additionally, osteoblasts secrete IL-6 to stimulate osteoclast formation. Smooth muscle cells in the tunica media of many blood vessels also produce IL-6 as a pro-inflammatory cytokine. IL-6's role as an anti-inflammatory cytokine is mediated through its inhibitory effects on TNF-alpha and IL-1, and activation of IL-1ra and IL-10. Interleukin-6 (IL6) has come to be regarded as a potential osteoporotic factor because it has stimulatory effects on cells of the osteoclast lineage, and, thus, may play a role in the pathogenesis of bone loss associated with estrogen deficiency.2 IL-6 has many roles essential to the regulation of the immune response, haematopoiesis, and bone resorption.3 It is involved not only in the hepatic acute phase response but also in adipose tissue metabolism, lipoprotein lipase activity, and hepatic triglyceride secretion. Overproduction of IL-6, a proinflammatory cytokine, is associated with a spectrum of age-related conditions including cardiovascular disease, osteoporosis, arthritis, type 2 diabetes, certain cancers, periodontal disease, frailty, and functional decline. BSF-2 is a novel interleukin consisting of 184 amino acids.
Keywords	B cell differentiation factor;B cell stimulatory factor 2;B-cell stimulatory factor 2;BSF 2;BSF-2;BSF2;CDF;CTL differentiation factor;Cytotoxic T cell differentiation factor;Hepatocyte stimulating fact

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GENE INFORMATION

Official Symbol	interleulin-6
Synonyms	B cell differentiation factor; B cell stimulatory factor 2; B-cell stimulatory factor 2; BSF 2; BSF-2; BSF2; CDF; CTL differentiation factor; Cytotoxic T cell differentiation factor; Hepatocyte stimulating fact
References	Benevides, L., et al. (2015). "IL17 Promotes Mammary Tumor Progression by Changing the Behavior of Tumor Cells and Eliciting Tumorigenic Neutrophils Recruitment." Cancer Res 75(18): 3788-3799. PubMed;Debock, I., et al. (2012). "Th17 alloimmunity prevents neonatal establishment of lymphoid chimerism in IL-4-deprived mice." Am J Transplant 12(1): 81-89. PubMed;Molinero, L. L., et al. (2011). "High TCR stimuli prevent induced regulatory T cell differentiation in a NF-kappaB-dependent manner." J Immunol 186(8): 4609-4617. PubMed;Prabhakara, R., et al. (2011). "Suppression of the inflammatory immune response prevents the development of chronic biofilm infection due to methicillin-resistant Staphylococcus aureus." Infect Immun 79(12): 5010-5018. PubMed;

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