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Product Information

Anti-IL6 high affinity antibody, Mouse monoclonal
clone IL6-4G1, purified from hybridoma cell culture

Product Number **SAB4200733**

Product Description

Anti-IL6 high affinity antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the IL6-4G1 hybridoma, produced by the fusion of mouse NS1 myeloma cells and splenocytes from a BALB/c mouse immunized with recombinant human IL6 (GeneID 3569). The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-IL6 specifically recognizes human IL6 (K_D ~4 x 10^{-11} M as measured by the Biacore system). The antibody is recommended to use in various immunological techniques, including Immunoblot (doublet at ~23kDa), Immunoprecipitation and ELISA. Detection of the IL-6 band by Immunoblotting is specifically inhibited by the immunogen.

Interleukin-6 (IL6), also known as B-cell stimulatory factor 2 (BSF-2), CTL differentiation factor (CDF), Hybridoma growth factor or Interferon beta-2 (IFN-beta-2) is a multifunctional cytokine that plays a wide variety of important biological roles in numerous systems including the immune, nervous and endocrine system.[1] IL6 is an essential component for hybridoma growth and is found in many supplemental cloning media. It is considered to perform as a primary regulator of acute and chronic inflammatory diseases and has been proven to be an excellent target for clinical treatment against autoimmune disorders such as rheumatoid arthritis, juvenile idiopathic arthritis and Castleman's disease. IL6 also plays a key role in the pathogenesis of multiple myeloma. It has been reported that serum IL6 levels are elevated in patients with different kinds of malignant disease.[2-4] Several clinical trials have shown the efficiency of using anti-IL6 antibodies[2-4] or anti-IL6 receptor antibodies[5] for blockage of the IL6 feedback loop and reduction of IL6 serum levels in patients.[2-5] Increased circulating IL6 levels are also clinically implemented as biomarker for Acute Coronary Syndrome (ACS)[6], unstable angina[7-8],cardiovascular disease, heart attack and stroke.[9]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblot: a working concentration of 2–4 μg/ml is recommended using concentrated supernatant of human osteosarcoma MG-63 cells treated with IL1β.

Immunoprecipitation: a working concentration 1–2 μg/test is recommended using concentrated supernatant of human osteosarcoma MG-63 cells treated with IL1β.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

1. Kitamura H., et al., *Immunity*, **23**, 491-502 (2003).
2. van Zaanen HC., et al., *J Clin Invest.*, **98**,1441-8 (1996).
3. Kocoglu M. and Badros A., *Pharmaceuticals (Basel)*, **9**, pii: E3 (2016).
4. Voorhees PM,. et al., *Br J Haematol.,* **161**, 357-66 (2013).

5. Semerano L., et al., *Expert Opin Investig Drugs*, **23**, 979-99 (2014).
6. Armstrong EJ., et al., *Circulation*, **113**, e72-e75 (2006).
7. Biasucci L., et al., *Circulation*, **94**, 874–7 (1996).
8. Biasucci L., et al., *Circulation*, **99**, 2079–84 (1999).
9. Ridker PM., et al., *New Eng J Med*, **336**, 973-9 (1997).

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