3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

SILu™Rich Anti-IL6 MAb, biotin conjugated
clone IL6-4G1, purified from hybridoma cell culture

Product Number **MSAB001**

Product Description

SILu™ Rich Anti-IL6 MAb (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 and is conjugated to biotin. The covalent coupling of biotin to the antibody allows the further capture of Avidin, Streptavidin or ExtrAvidin® bearing molecules in a wide variety of environments.

SILu™Rich Anti-IL6 MAb is a high affinity antibody (K_D ~4 x 10^{-11} M, as measured by the Biacore system). The antibody recognizes human IL6 and is recommended for use in various immunological techniques including IAE-MS (ImmunoAffinity Enrichment-Mass Spectrometry), Immunoprecipitation and Immunoblot.

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 mediates a wide range of physiological responses. It plays an important role in numerous biological functions within the immune, nervous and endocrine systems.[1] IL6 is the major regulator of acute and chronic inflammatory diseases and has been proven to be a valuable target for diagnostic and clinical treatment against autoimmune disorders.[2-8]

IAE-MS emerging technology combines two major strategies for protein analysis; high affinity antibodies for the enrichment of low abundant proteins from biological samples followed by selective protein quantification and characterization by mass spectrometry analysis.[6-7] IAE-MS can be performed across a wide range of analyte concentrations in different matrices including tissues, cell extracts and bio-fluids. This scientific approach might be valuable for both research proteomics and clinical diagnostics.[9-11]

Anti-IL6 Antibodies can be a useful tool for the research of various autoimmune-related diseases, such as rheumatoid arthritis, juvenile idiopathic arthritis and Castleman's disease. In addition, detection of high levels of IL-6 in the serum are related to cardiovascular disease, heart attack, stroke and multiple myeloma.[2-8]

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

Immunoprecipitation: a working concentration of 1–2 μg/test is recommended using concentrated supernatant of human osteosarcoma MG-63 cells induced 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. Biasucci L., et al., *Circulation*, **94**, 874–877 (1996).
7. Biasucci L., et al., *Circulation*, **99**, 2079–84 (1999).
8. Ridker PM., et al., *New Eng J Med.*, **336**, 973-9 (1997).
9. Schoenherr RM., et al., *Proteomics*, **16**, 2141-5 (2016).
10. Boström T., *J Chromatogr B Analyt Technol Biomed Life Sci*., **1021**, 3-13 (2016).
11. Guo A., et al., *Mol Cell Proteomics*, **13**, 372-87 (2014).

SG,DR_LV,PHC 03/17-1