Leinco Technologies, Inc.
excellence in early discovery research™

Human CD3 Antibody

Purified *in vivo* GOLD™ Functional Grade

Monoclonal Antibody

Product Information

Product No.: C2487
Clone: OKT-3
Isotype: Mouse IgG2a k
Storage: Sterile 2° to 8°C

Product Description

Specificity:
OKT-3 activity is directed against a conformational epitope on human CD3ε.

Antigen Distribution:
CD3 is expressed on mature T cells and medullary thymocytes.

Background:
CD3 is an invariant antigen of the T cell receptor (TCR) belonging to the Ig superfamily[1]. The CD3/TCR complex is composed of a αβ or γδ TCR heterodimer noncovalently associated with invariant CD3 dimers εγ, εδ, and ζζ in a 1:1:1:1 stoichiometry. The TCR mediates recognition of antigenic peptides bound to major histocompatibility complex (MHC) molecules on antigen- presenting cells, while the CD3 portion of the complex transduces activation signals to the T cell nucleus. Together, TCR and CD3 molecules initiate protective immunity against microbes and cancers.

OKT-3 was generated by immunizing a BALB/c or CAF1 mouse with human peripheral blood lymphocytes[2]. Spleen cells were fused with P3x63Ag8.U1 myeloma cells for hybridoma production.

OKT-3 was initially developed as a pan-T cell antibody to differentiate between cell types[3] and later . became the first monoclonal antibody to be approved for therapy in humans[4]. OKT-3 acts as an immunosuppressive drug in transplant patients[5], type 1 diabetes, and psoriasis[6]. OKT-3 recognizes, binds, and blocks the CD3 complex of the T cell receptor[4] and thereby blocks the generation and function of cytotoxic T cells[7]. The OKT-3/CD3εγ structure has been resolved[6].

Known Reactivity Species:
Human

Format:
Purified *in vivo* GOLD™ Functional Grade

Immunogen:
Human peripheral blood lymphocytes

Formulation
This monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.

Purity
≥95% monomer by analytical SEC, >95% by SDS Page

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Endotoxin
< 1.0 EU/mg as determined by the LAL method

Storage and Stability
Functional grade preclinical antibodies may be stored sterile as received at 2° to 8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at ≤ -70°C.

Avoid Repeated Freeze Thaw Cycles

Product Preparation
Functional grade preclinical antibodies are manufactured in an animal free facility using only in vitro protein free cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.

Other Applications Reported in Literature:
B,
Depletion,
FA,
FC,
IF,
RIA

Country of Origin
USA

References
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