

Human CD3 Antibody

Purified *in vivo* GOLD™ Functional Grade

Monoclonal Antibody

Product Information

Product No.: C364
Clone: UCHT-1
RRID: AB_2829677
Isotype: Mouse IgG1 κ
Storage: Sterile 2 to 8°C

Product Description**Specificity:**

Clone UCHT-1 binds to an acidic region of CD3-epsilon, occluding this region from direct interaction with the T cell receptor. This antibody is considered a pan T-cell marker. Furthermore, this antibody can be used for the detection of T cell populations in peripheral blood, lymph nodes and the categorisation of T versus B cell lymphomas and leukaemia's. It reacts with the majority of peripheral blood T lymphocytes, a significant proportion of thymocytes, the majority of T cell chronic lymphocytic leukemia cells and approximately 70% of acute lymphoblastic leukaemia's of T cell origin.

Antigen Distribution:

CD3 is expressed on human peripheral blood lymphocytes, splenic lymphocytes, and the majority of T-CLL and T-ALL cells.

Background:

CD3 ϵ is a 20kDa subunit of the TCR complex and is a transmembrane T-cell surface glycoprotein that belongs to the Ig superfamily. It is one of five polypeptide chains that form the TCR complex by associating with the CD3 δ , γ and ζ chains, in addition to the TCR α/β or γ/δ chains. CD3 is involved in TCR signaling, enumeration of immunocompetent T-lymphocytes in peripheral blood, and signal transduction during antigen recognition.

Known Reactivity Species:

Human

Format:

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Immunogen:

This antibody was created by Professor Peter Beverley, a pioneer in creating hybridomas from mice immunized against human lymphocytes, with UCHT1 being one of the first successful fusions.

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

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 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at $\leq -70^{\circ}\text{C}$.

Avoid Repeated Freeze Thaw Cycles.

Product Preparation

Functional grade preclinical antibodies are manufactured in an animal free facility using *in vitro* 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.

Applications

Applications and Recommended Usage (Quality Tested By Leinco):

FC The suggested concentration for this UCHT-1 antibody for staining cells in flow cytometry is $\leq .25\ \mu\text{g}$ per 10^6 cells in a volume of 100 μl or 100 μl of whole blood. Titration of the reagent is recommended for optimal performance for each application.

WB

Other Applications Reported in Literature:

CODEX®

CyTOF®

IP

Activation

IHC (Frozen) The suggested concentration for this UCHT-1 antibody in IHC staining on frozen tissue is 5.0 - 10 μg per ml. Titration of the reagent is recommended for optimal performance for each application.

Country of Origin

USA

References

- 1) Hitsuda, Y. *et al.* (1999) *Yonago Acta medica* 42:1–10 [Article Link](#)
- 2) van Dongen, J. *et al.* (1988) *Blood* 71:603
- 3) Meuer, SC. *et al.* (1983) *Nature* 303:808
- 4) Beverly, P. *et al.* (1981) *Eur. J. Immunol.* 11:329
- 5) Leukocyte Typing III: Code No. 126, 208 and 471; 4th Workshop: Paper No. T3.2