PRODUCT DATASHEET

Anti-CD3 [UCH-T1®]
Cat. #151175

Contributor Information

Name Peter Beverley
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Primary citation Beverley et al. 1981. Eur J Immunol. 11(4):329-34. PMID: 6788570

Tool Details

Tool Name: Anti-CD3 [UCH-T1®]
Alternate names: T3 complex
Clone: UCH-T1
Tool type: Antibodies
Tool sub-type: Primary antibody
Class: Monoclonal
Conjugate: Unconjugated
Reactivity: Human
Host: Mouse
Application: FACS ; IHC ; IF ; IP ; Fn ; RIA ; WB
Strain: Balb/c
Description: CRT trademarked famous anti-CD3 monoclonal antibody, capable of differentiating between T vs B cells lymphomas and leukaemia's.
Immunogen: Human infant thymocytes and Sezary cells.
Immunogen UniProt ID: P04234
Isotype: IgG1
Research area: Cancer ; Cell Type or Organelle Marker ; Cell Signaling & Signal Transduction ; Immunology ; Stem Cell Biology
Myeloma used: P3/NS1/1-Ag4.1
Additional notes: UCH-T1® is a registered trademark of Cancer Research Technology, Limited. All rights reserved.
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Target Details

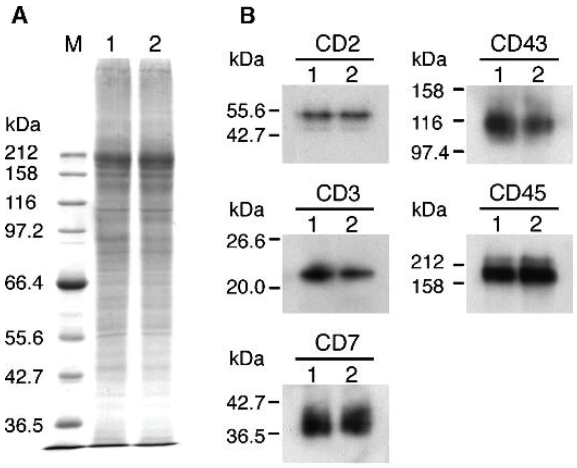
Target: CD3
Target background: The CD3 complex, composed of four distinct CD3 polypeptide chains (CD3γ, CD3δ and 2X CD3Ε), associates with the T cell antigen receptor (TCR). It is found on all mature human T lymphocytes, NK cells and some thymocytes. CD3 is a member of the immunoglobulin superfamily, involved in antigen recognition, T lymphocyte activation and signal transduction. UCH-T1 is considered a pan T-cell marker - it can be used for the detection of T cell populations in peripheral blood and 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 major proportion of thymocytes, the majority of T cell chronic lymphocytic leukaemia cells, Sézary leukaemia's and approximately 70% of acute lymphoblastic leukaemia's of T cell origin. It can also be used to study the role of CD3 in TCR signal transduction events. This antibody was created by Professor Peter Beverley, a pioneer in creating hybridomas from mice immunised against human lymphocytes, with UCHT1 being one of the first successful fusions.

Application Details

Application: FACS ; IHC ; IF ; IP ; Fn ; RIA ; WB

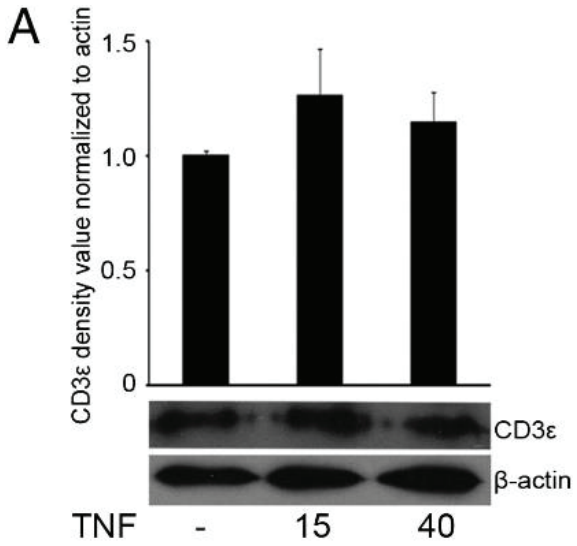
Handling

Format: Liquid
Concentration: 1 mg/ml
Storage buffer: PBS with 0.02% azide
Storage conditions: Store at -20°C frozen. Avoid repeated freeze / thaw cycles
Shipping conditions: Shipping at 4°C



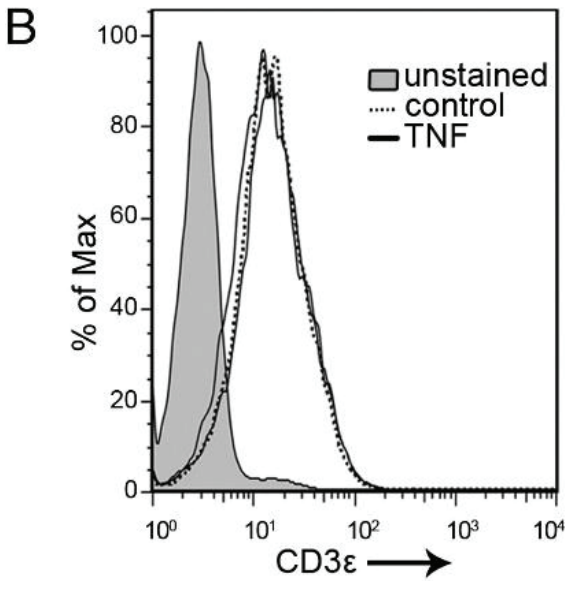
Comparison of Gal 1 and CSGal 1 binding proteins in Jurkat cells. Gal 1 and CSGal 1 binding proteins were affinity purified from the solubilized membrane fraction of Jurkat cells using a Gal 1/CSGal 1 immobilized column. (A) The affinity purified proteins were resolved by means of SDS PAGE and then stained with Coomassie Brilliant Blue R 250. (B) The affinity purified proteins were subjected to Western blot analysis using antibodies against the candidate receptor proteins for Gal 1. Lane 1, the affinity purified proteins with the Gal 1 immobilized column; lane 2, the affinity purified proteins with the CSGal 1 immobilized column. M, molecular weight marker proteins

Adapted from Nishi N, Abe A, Iwaki J, Yoshida H, Itoh A, Shoji H, Kamitori S, Hirabayashi J, Nakamura T. Functional and structural bases of a cysteine less mutant as a long lasting s ubstitute for galectin 1. Glycobiology. 2008 Dec;18(12):1065 73. doi: 10.1093/glycob/cwn089. Epub 2008 Sep 16. PMID: 18796645.



TNF treatment does not influence the expression of CD3ε chain. (A) Jurkat cells were treated with 15 and 40 ng/ml TNF for 24 h, and then, the CD3ε level was measured by Western blot analysis. (B) Surface expressio n of CD3ε. Neither the 5 ng/ml nor the 40 ng/ml TNF influenced the expression of
CD3ε. Cell surface ε chains were directly fluorescently labeled, and then, samples were measured by flow cytometry. Data from two independent experiments were visualized with FlowJo by normalizing to the peak height.

Adapted from Érsek B, Molnár V, Balogh A, Matkó J, Cope AP, Buzás EI, Falus A, Nagy G. CD3ζ chain expression of human T lymphocytes is regulated by TNF via Src like adaptor protein dependent proteasomal degradation. J Immunol. 2012 Aug 15;189(4):1602 10. doi: 10.4049/-jimmunol. 1102365. Epub 2012 Jul 13. PMID: 22798681.



References

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