

TECHNICAL DATA SHEET

CyFlow™ CD137 PE Anti-Hu; Clone 4B4-1

REF BN858229

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD137
Alternative Names	4-1BB, TNFRSF9
Clone	4B4-1
Clonality	monoclonal
Format	PE
Host / Isotype	Mouse / IgG1
Species Reactivity	Human, Non-Human Primates
Negative Species Reactivity	—
Quantity	100 tests
Immunogen	Recombinant human CD137 ectodomain

Specificity

The mouse monoclonal antibody 4B4-1 recognizes CD137 antigen, a 40 kDa type I transmembrane protein of the TNFR family expressed mainly on activated T cells.

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Application

The reagent is designed for Flow Cytometry analysis of human blood cells. Recommended usage is 10 µl reagent / 100 µl of whole blood or 10⁶ cells in a suspension. The content of a vial (1 ml) is sufficient for 100 tests.

Other usages may be determined from the scientific literature.

Storage Buffer

The reagent is provided in stabilizing phosphate buffered saline (PBS) solution, pH ≈7.4, containing 0.1% (w/v) sodium azide.

Storage and Stability

Storage	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
Stability	Do not use after expiration date stamped on vial label.

Background Information

CD137 (TNFRSF9, 4-1BB), is an inducible costimulatory molecule expressed mainly on activated T cells. Its ligand, known as 4-1BBL, is expressed on activated macrophages, mature B cells, hematopoietic stem cells, and myeloid progenitor cells. CD137 signaling leads to maintaining the survival of activated T cells and CD8+ memory T cells, and clonal expansion of T cells, but also to suppressing myelopoiesis and dendritic cell development. Triggered CD137 induces a cytokine release profile regulating peripheral monocyte survival. Soluble forms of CD137 may provide negative control mechanism for some immune responses.

References

- Chan SL, Voskens CJ, Lin W, Schindler DG, Azimzadeh A, Wang LX, Taylor RJ, Strome SE, Schulze DH: Epitope mapping of a chimeric CD137 mAb: a necessary step for assessing the biologic relevance of non-human primate models. J Mol Recognit. 2009 May-Jun; 22(3):242-9. < PMID: 19177494 >
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- Bellarosa D, Bressan A, Bigioni M, Parlani M, Maggi CA, Binaschi M: SAHA/Vorinostat induces the expression of the CD137 receptor/ligand system and enhances apoptosis mediated by soluble CD137 receptor in a human breast cancer cell line. Int J Oncol. 2012 Oct; 41(4):1486-94. < PMID: 22797667 >

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- Yi L, Zhao Y, Wang X, Dai M, Hellström KE, Hellström I, Zhang H: Human and mouse CD137 have predominantly different binding CRDs to their respective ligands. PLoS One. 2014 Jan 21; 9(1):e86337. < PMID: 24466035 >

The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

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