

TECHNICAL DATA SHEET

CyFlow™ CD137 Low Endotoxin Anti-Hu; Clone 4B4-1

REF BG450221

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	Low Endotoxin
Host / Isotype	Mouse / IgG1
Species Reactivity	Human, Non-Human Primates
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [1 mg/ml]
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

Based on published sources, this antibody is suitable for the following applications:

- Flow cytometry
- Immunoprecipitation
- Functional assays
- Enzyme-linked immunosorbent assay

Storage Buffer

The reagent is provided in azide-free phosphate buffered saline (PBS) solution, pH ≈7.4; 0.2 µm filter sterilized. Endotoxin level is less than 0.01 EU/µg of the protein, as determined by the LAL test.

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 >
- Fernández Do Porto DA, Jurado JO, Pasquinelli V, Alvarez IB, Aspera RH, Musella RM, García VE: CD137 differentially regulates innate and adaptive immunity against Mycobacterium tuberculosis. Immunol Cell Biol. 2012 Apr; 90(4):449-56. < PMID: 21747409 >

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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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