

# anti-human CD137

## Monoclonal antibody 4B4-1 to human CD137

Cat-No: **21270371**

100 µg in 100 µl

**Clone:** 4B4-1

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

**HLDA VI; WS Code C-7**

**Isotype subclass:** Mouse IgG1

**Purity:** > 95% (by SDS-PAGE)

**Form:** Purified from cell culture supernatant by protein-A affinity chromatography.

**Physical state:** Liquid

**Buffer/Additives/Preservative:** PBS containing 0.09 % sodium azide (pH 7.2).

**Expiration date:** The reagent is stable until the expiry date stated on the vial label.

**Storage conditions:** Store at 2-8°C. Do not freeze. Do not use after expiration date.

**Application:** ELSA, Immunoprecipitation, Flow Cytometry

### 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. doi: 10.1002/jmr.937.
- \*) 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.
- \*) 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.
- \*) 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.

**Background:** CD137, also known as TNFRSF9 or 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.

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