Antibodies

Anti-Human CD137 Antibody, Clone 4B4-1, FITC

Mouse monoclonal IgG1 antibody against human, monkey CD137, FITC-conjugated

Catalog #100-1355

120 Tests 1.67 µl/test

STEMCELL™ TECHNOLOGIES
Scientists Helping Scientists™ | WWW.STEMCELL.COM
TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM
FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Product Description

This mouse monoclonal antibody (clone 4B4-1, FITC-conjugated) reacts with human and monkey CD137, a type I membrane protein and a member of the tumor necrosis factor (TNF) receptor superfamily. Following activation, it is expressed on multiple immune cells, such as natural killer (NK), T, and dendritic cells. CD137 plays a role in cytokine activation, preventing activation-induced cell death, and it also plays a role in promoting the activity of cytotoxic T cells. As an immune stimulator, CD137 can influence the tumor microenvironment by increasing the cytotoxicity of T and NK cells as well as their ability to infiltrate tumors. For these reasons, CD137 represents a strong candidate for cancer immunotherapy. CD137 deficiency in humans has been hypothesized to inhibit differentiation and function of T cells; CD137-deficient mice have been reported to have impaired T cell cytotoxicity, proliferation, and survival.

Target Antigen Name:	CD137
Alternative Names:	4-1BB, CDw137, ILA, TNFRSF9
Gene ID:	3604
Species Reactivity:	Human, Monkey
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	4B4-1
Isotype:	IgG1, kappa
Immunogen:	Fusion protein of recombinant human 4-1BB ectodomain
Conjugate:	FITC (Fluorescein isothiocyanate)

Applications

Verified:	FC
Reported:	FC

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IHC-P: Immunohistochemistry (paraffin-embedded); IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	50 mM sodium phosphate, 100 mM potassium chloride, 150 mM sodium chloride, pH 7.5, containing 5% glycerol, 0.2% (w/v) bovine serum albumin, and 0.04% sodium azide
Purification:	The antibody was purified by affinity chromatography.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Stable until expiry date (EXP) on label.
Directions for Use:	For flow cytometry, the suggested use of this antibody is 1.67 µL per 5 x 10^5 cells in 80 µL. It is recommended that the antibody be titrated for optimal performance for each application.

Related Products

For a complete list of antibodies, including other conjugates, sizes, and clones, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/antibodies, or contact us at techsupport@stemcell.com.

References

1. Segal NH et al. (2017) Results from an integrated safety analysis of urelumab, an agonist anti-CD137 monoclonal antibody. Clinical Cancer Research 23(8): 1929–36.

2. Somekh I et al. (2019) CD137 deficiency causes immune dysregulation with predisposition to lymphomagenesis. Blood 134(18): 1510–6.

3. Seidel J et al. (2021) Role of ADAM10 and ADAM17 in regulating CD137 function. International Journal of Molecular Sciences 22(5): 2730.

4. Wu M et al. (2019) Induction of CD137 expression by viral genes reduces T cell costimulation. Journal of Cellular Physiology 234(11): 21076–88.

5. Wehler T. C. et al. (2008) Rapid identification and sorting of viable virus-reactive CD4+ and CD8+ T cells based on antigen-triggered CD137 expression. Journal of Immunological Methods 339(1): 23–37. (FC)