PE/Cyanine7 anti-human CD137 (4-1BB) Antibody

Catalog# / Size	309817 / 25 tests 309818 / 100 tests
Clone	4B4-1
Regulatory Status	RUO
Workshop	VI C-7
Other Names	4-1BB, ILA, CD137, TNFRSF9
Isotype	Mouse IgG1, κ
Description	CD137 is a 39 kD transmembrane protein also known as 4-1BB. It is expressed on activated T cells. CD137 is a type I membrane protein and a member of the tumor necrosis factor receptor superfamily. CD137 appears to be important for T cell proliferation and survival, and induces monocyte activation through its interaction with 4-1BB ligand.

Product Details

Verified Reactivity	Human
Reported Reactivity	Chimpanzee, Baboon, Cynomolgus, Rhesus
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Ectodomain of recombinant human 4-1BB fusion protein
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PE/Cyanine7 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. **Do not freeze.**
Application	FC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Additional reported applications (for the relevant formats) include: immunoprecipitation[1,4], inhibition of cytokine production[2,3], and ELISA. For most successful immunofluorescent staining results, it may be important to maximize signal over background by using a relatively bright fluorochrome-antibody conjugate (Cat. No. 309804) or by using a high sensitivity, three-layer staining technique (e.g., including a biotinylated anti-mouse IgG second step (Cat. No. 405303), followed by Streptavidin-PE (Cat. No. 405204)).
Additional Product Notes	BioLegend is in the process of converting the name PE/Cy7 to PE/Cyanine7. The dye molecule remains the same, so you should expect the same quality and performance from our PE/Cyanine7 products. Please contact Technical Service if you have any questions.

Application References

(PubMed link indicates BioLegend citation)

1. Garni-Wagner B, *et al.* 1996. *Cell. Immunol.* 169:91. (IP)
2. Salih HR, *et al.* 2000. *J. Immunol.* 165:2903. (FA)
3. Kienzle G, *et al.* 2000. *Int. Immunol.* 12:73. (FA)
4. Langstein J, *et al.* 1998. *J. Immunol.* 160:2488. (IP)

Product Citations

1. Chacon J, *et al.* 2015. Clin Cancer Res. 21:611. PubMed
2. Rodriguez-García A, *et al.* 2020. Mol Ther. 28:548. PubMed
3. Tischer S, *et al.* 2012. Int Immunol. 24:561. PubMed
4. Chen M, *et al.* 2021. Cancers (Basel). 13:. PubMed
5. Afanasiev O, *et al.* 2013. Clin Cancer Res. 19:5351. PubMed
6. Sandt C, *et al.* 2016. J Virol. 90: 1009 - 1022. PubMed
7. Hodge G, *et al.* 2013. J Heart Lung Transplant. 1053:1357. PubMed
8. Kilpelainen A, *et al.* 2022. Front Immunol. 13:815041. PubMed
9. Gao Y, *et al.* 2022. Immunity. 55:1732. PubMed
10. Thieme CJ, *et al.* 2020. Cell Rep Med. 1:100092. PubMed
11. Menges D, *et al.* 2022. Nat Commun. 13:4855. PubMed
12. Duhen R, *et al.* 2021. Nat Commun. 12:1047. PubMed
13. Lecciso M, *et al.* 2017. Front Immunol. . 10.3389/fimmu.2017.01918. PubMed

RRID

AB_2287731 (BioLegend Cat. No. 309817)
AB_2207741 (BioLegend Cat. No. 309818)

Antigen Details

Structure	TNFR superfamily, type I transmembrane protein, 30 kD
Distribution	Activated T cells
Function	T cell costimulation
Ligand/Receptor	4-1BB ligand
Cell Type	T cells
Biology Area	Costimulatory Molecules, Immunology
Molecular Family	CD Molecules
Antigen References	1. Gruss H, *et al.* 1995. *Blood* 85:3378. 2. Sica G, *et al.* 2000. *Adv. Exp. Med. Biol.* 465:355. 3. Alderson M, *et al.* 1994. *Eur. J. Immunol.* 24:2219. 4. Schwarz H, *et al.* 1996. *Blood* 87:2839.
Gene ID	3604

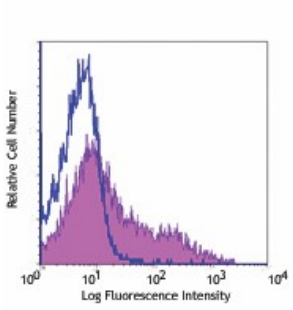
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

Purified anti-human CD137 (4-1BB), PE anti-human CD137 (4-1BB), Biotin anti-human CD137 (4-1BB), PE/Cyanine5 anti-human CD137 (4-1BB), APC anti-human CD137 (4-1BB), PerCP/Cyanine5.5 anti-human CD137 (4-1BB), Alexa Fluor® 700 anti-human CD137 (4-1BB), PE/Cyanine7 anti-human CD137 (4-1BB), Brilliant Violet 421™ anti-human CD137 (4-1BB), APC/Cyanine7 anti-human CD137 (4-1BB), Brilliant Violet 605™ anti-human CD137 (4-1BB), Alexa Fluor® 647 anti-human CD137 (4-1BB), PE/Dazzle™ 594 anti-human CD137 (4-1BB), Brilliant Violet 650™ anti-human CD137 (4-1BB), Brilliant Violet 711™ anti-human CD137 (4-1BB), APC/Fire™ 750 anti-human CD137 (4-1BB), TotalSeq™-A0355 anti-human CD137 (4-1BB), TotalSeq™-B0355 anti-human CD137 (4-1BB), TotalSeq™-C0355 anti-human CD137 (4-1BB), Ultra-LEAF™ Purified anti-human CD137 (4-1BB), Brilliant Violet 750™ anti-human CD137 (4-1BB), TotalSeq™-D0355 anti-human CD137 (4-1BB)

Product Data



PHA-stimulated (3 days) human peripheral blood mononuclear cells stained with 4B4-1 PE/Cyanine7

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