

PE anti-mouse CD150 (SLAM) Antibody

Catalog# / Size	115903 / 25 µg 115904 / 100 µg
Clone	TC15-12F12.2
Regulatory Status	RUO
Other Names	Signaling Lymphocyte Activation Molecule (SLAM), IPO-3
Isotype	Rat IgG2a, λ
Description	CD150 is a 75-95 kD member of the immunoglobulin superfamily, also known as SLAM (signaling lymphocyte activation molecule) or IPO-3. CD150, a single chain type I transmembrane molecule, is expressed on thymocytes, T cell subsets, B cells, dendritic cells, and endothelial cells. The expression is upregulated upon activation. CD150 expression has been shown to be maintained on Th1 but not Th2 clones. T regulatory cells express a relatively high level of CD150. Antibodies against CD150 have been shown to augment IFN-γ production by Th1 cells, especially when co-stimulated through the TCR. CD150 associates with the src homology 2-domain-containing protein tyrosine phosphatase SHP-2, and this association is thought to be involved in signal transduction. In combination with CD48, CD150 is a useful marker for hematopoietic stem cell studies.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Mouse SLAM-human IgG1 fusion protein
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with PE under optimal conditions.
Concentration	0.2 mg/ml
Storage & Handling	The CD150 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 ≤0.25 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	The TC15-12F12.2 antibody has been reported to enhance the production of IFN-γ by Th1 cells stimulated through TCR. Additional reported applications (for the relevant formats) include: immunoprecipitation ¹⁷ , enhancing IFN-γ production by Th1 cells when stimulated with CD3 ¹ , and inhibiting CD3 induced T cell proliferation ⁶ . The Ultra-LEAF™ purified antibody (Endotoxin <0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 115949 & 115950).
Application References	<ol style="list-style-type: none"> 1. Castro AG, <i>et al.</i> 1999. <i>J. Immunol.</i> 163:5860. (FC, Costim, IP) 2. Forsberg EC, <i>et al.</i> 2005. <i>PLoS Genet.</i> 1:e28. (FC) 3. Terrazas LI, <i>et al.</i> 2005. <i>Int. J. Parasitol.</i> 35:1349. (FC) 4. Cannons JL, <i>et al.</i> 2006. <i>J. Exp. Med.</i> 203:1551. (FC) 5. Umemoto T, <i>et al.</i> 2006. <i>J. Immunol.</i> 177:7733. (FC) 6. Jordan MA, <i>et al.</i> 2007. <i>J. Immunol.</i> 178:1618. (FC, Block) PubMed
(PubMed link indicates BioLegend citation)	

7. Jung Y, *et al.* 2007. *Blood* 110:82. [PubMed](#)
8. Pimanda JE, *et al.* 2007. *Proc. Natl. Acad. Sci. USA* 104:840.
9. Sugiyama T, *et al.* 2007. *Proc. Natl. Acad. Sci. USA* 104:175.
10. Kim I, *et al.* 2006. *Blood* 108:737. [PubMed](#)
11. Ema H, *et al.* 2006. *Nat Protoc.* 1:2979. [PubMed](#)
12. Fraser ST, *et al.* 2007. *Blood* 109:4616. [PubMed](#)
13. Jung Y, *et al.* 2008. *Stem Cells.* 26:2042. [PubMed](#)
14. Song J, *et al.* 2010. *Blood* 115:2592. [PubMed](#)
15. Cridland SO, *et al.* 2009. *Blood Cell. Mol. Dis.* 43:149. (FC) [PubMed](#)
16. Morita Y, *et al.* 2010. *J. Exp Med.* 207:1173. [PubMed](#)
17. Talei N, *et al.* 2015. *J. Immunol.* 195(10):4623. [PubMed](#)

Product Citations

1. Hu W, *et al.* 2015. *Blood.* 125:2206. [PubMed](#)
2. Pietras E, *et al.* 2016. *Nat Cell Biol.* 10.1038/ncb3346. [PubMed](#)
3. Chen Q, *et al.* 2019. *Cell Stem Cell.* 25(6):768-783.e6. [PubMed](#)
4. Soukup AA, *et al.* 2019. *J Clin Invest.* 129:1180. [PubMed](#)
5. Grigsby SM, *et al.* 2021. *Cancers (Basel).* 13:. [PubMed](#)
6. Ho TT, *et al.* 2021. *J Exp Med.* 218:. [PubMed](#)
7. Jabbar S, *et al.* 2022. *Exp Hematol Oncol.* 11:83. [PubMed](#)
8. Nita A, *et al.* 2021. *Cell Reports.* 34(5):108688. [PubMed](#)
9. Maltby S, *et al.* 2014. *J Immunol.* 193:4072. [PubMed](#)
10. Hirata Y *et al.* 2018. *Cell stem cell.* 22(3):445-453 . [PubMed](#)
11. Bowers E, *et al.* 2018. *Nat Med.* 24:95. [PubMed](#)
12. Thomas GE, *et al.* 2022. *Nat Cell Biol.* 24:872. [PubMed](#)
13. Yang X, *et al.* 2020. *Blood Sci.* 2:89. [PubMed](#)
14. Wei Q, *et al.* 2021. *Nat Commun.* 12:2522. [PubMed](#)
15. Liu X, *et al.* 2021. *eLife.* 0.4166666666666667. [PubMed](#)
16. Yamamoto K, *et al.* 2021. *Cell Reports.* 36(8):109576. [PubMed](#)
17. Gao B, *et al.* 2018. *Aging Cell.* 3. [PubMed](#)
18. Zhao M, *et al.* 2019. *Cell Rep.* 26:652. [PubMed](#)
19. Fukushima T, *et al.* 2019. *Cell Rep.* 29:4144. [PubMed](#)
20. Kobayashi H, *et al.* 2020. *STAR Protoc.* 1:100078. [PubMed](#)
21. Jung Y, *et al.* 2008. *Stem Cells.* 26:2042. [PubMed](#)
22. Fujino T, *et al.* 2021. *Nat Commun.* 12:1826. [PubMed](#)
23. Li CC, *et al.* 2022. *Nat Commun.* 13:346. [PubMed](#)
24. Kokkaliaris K, *et al.* 2016. *Blood.* 128: 1181 - 1192. [PubMed](#)
25. Greenbaum A, *et al.* 2012. *Blood.* 120:295. [PubMed](#)
26. Vannini N, *et al.* 2019. *Cell Stem Cell.* 24:405. [PubMed](#)
27. Nakamura-Ishizu A *et al.* 2018. *Cell reports.* 25(7):1772-1785 . [PubMed](#)
28. Kim SP, *et al.* 2021. *Cell Reports.* 36(9):109626. [PubMed](#)
29. Ganuza M, *et al.* 2017. *Exp Hematol.* 10.1016/j.exphem.2017.04.006. [PubMed](#)
30. Stivala S, *et al.* 2019. *J Clin Invest.* 130:1596. [PubMed](#)
31. Baccelli I, *et al.* 2020. *Cancer Cell.* 36(1):84-99. [PubMed](#)
32. Hillel-Karniel C, *et al.* 2020. *Cell Reports.* 30(3):807-819.e4.. [PubMed](#)
33. Leiva M, *et al.* 2016. *Nat Commun.* 7:10222. [PubMed](#)
34. Grassinger J, *et al.* 2012. *Cytokine.* 58:218. [PubMed](#)
35. Jung Y, *et al.* 2011. *Exp Hematol.* 39:151. [PubMed](#)
36. Jordan M, *et al.* 2007. *J Immunol.* 178:1618. [PubMed](#)
37. Chen X *et al.* 2017. *Cell stem cell.* 21(6):747-760 . [PubMed](#)
38. Mooney C, *et al.* 2017. *International Journal of Molecular Sciences.* 10.3390/ijms18051037. [PubMed](#)
39. Kinkel SA, *et al.* 2022. *iScience.* 25:104684. [PubMed](#)
40. Jia W, *et al.* 2021. *Nat Commun.* 12:2118. [PubMed](#)
41. Zhang J, *et al.* 2015. *Leukemia.* 29 1847 . [PubMed](#)
42. Bahal R, *et al.* 2016. *Nat Commun.* 7:13304. [PubMed](#)
43. Li Y, *et al.* 2020. *Cell Stem Cell.* 27(5):732-747.e7. [PubMed](#)
44. Breitbach M, *et al.* 2018. *Cell Stem Cell.* 1.098611111. [PubMed](#)
45. Tadokoro Y, *et al.* 2018. *Cell Stem Cell.* 1.411805556. [PubMed](#)
46. Ise W, *et al.* 2018. *Immunity.* 48:702. [PubMed](#)
47. Comazzetto S *et al.* 2018. *Cell stem cell.* 24(3):477-486 . [PubMed](#)
48. Kim I, *et al.* 2006. *Blood.* 108:737. [PubMed](#)
49. Dong S, *et al.* 2021. *Nature.* 591:117. [PubMed](#)
50. Witkowski MT, *et al.* 2020. *Cancer Cell.* 37:867. [PubMed](#)
51. Montecino-Rodriguez E, *et al.* 2020. *STAR Protoc.* 1:100159. [PubMed](#)
52. Chiba H, *et al.* 2013. *Am J Physiol Cell Physiol.* 305:693. [PubMed](#)
53. Morita Y, *et al.* 2010. *J Exp Med.* 207:1173. [PubMed](#)
54. Jung Y, *et al.* 2007. *Blood .* 110:82. [PubMed](#)
55. Nagai M, *et al.* 2020. *Cell.* 178(5):1072-1087.e14.. [PubMed](#)
56. Hsu JI *et al.* 2018. *Cell stem cell.* 23(5):700-713 . [PubMed](#)
57. Reismann D, *et al.* 2017. *Nat Commun..* 10.1038/s41467-017-01538-9. [PubMed](#)
58. Pinho S, *et al.* 2022. *Nat Cell Biol.* 24:290. [PubMed](#)
59. Ye P, *et al.* 2022. *Front Cardiovasc Med.* 8:810477. [PubMed](#)
60. Du J, *et al.* 2012. *Stem Cells.* 30:1447. [PubMed](#)
61. Noshov S, *et al.* 2020. *Int J Mol Sci.* 21:00. [PubMed](#)
62. Kruta M, *et al.* 2021. *Cell Stem Cell.* . [PubMed](#)
63. Seneviratne AK, *et al.* 2019. *Cell Stem Cell.* 24:621. [PubMed](#)
64. Nacson J, *et al.* 2020. *Molecular Cell.* 78(5):951-959. [PubMed](#)
65. Yi W, *et al.* 2021. *Cell Reports.* 34(13):108922. [PubMed](#)

66. Song J, *et al.* 2010. *Blood*. 115:2592. [PubMed](#)
67. van Oostrum M, *et al.* 2019. *Nat Commun*. 4:398611111. [PubMed](#)
68. Williams JW, *et al.* 2017. *Circ Res*. 121:662. [PubMed](#)
69. Pierce H, *et al.* 2017. *Cell Stem Cell*. 1.283333333. [PubMed](#)
70. Chen Z, *et al.* 2019. *J Exp Med*. 216:152. [PubMed](#)
71. Pinho S *et al.* 2018. *Developmental cell*. 44(5):634-641 . [PubMed](#)
72. Xia P *et al.* 2018. *Immunity*. 48(4):688-701 . [PubMed](#)
73. Yang S, *et al.* 2022. *J Exp Med*. 219:. [PubMed](#)
74. Sacma M, *et al.* 2022. *STAR Protoc*. 3:101483. [PubMed](#)
75. Thongthip S, *et al.* 2016. *Genes Dev*. 30: 645 - 659. [PubMed](#)
76. Philip E Boulais *et al.* 2018. *Immunity*. 49(4):627-639 . [PubMed](#)
77. Balzano M *et al.* 2019. *Cell reports*. 26(12):3257-3271 . [PubMed](#)
78. Kobayashi H, *et al.* 2020. *Cell Reports*. 28(1):145-158.e9.. [PubMed](#)
79. Garaycochea JI, *et al.* 2018. *Nature*. 553:171. [PubMed](#)
80. Wei Q, *et al.* 2020. *Dev Cell*. 53:503. [PubMed](#)
81. Chen R, *et al.* 2021. *Cell Reports*. 34(7):108751. [PubMed](#)
82. Wang X, *et al.* 2018. *Stem Cell Reports*. 11:274. [PubMed](#)
83. Matsumura T, *et al.* 2022. *Nat Commun*. 13:7064. [PubMed](#)
84. Zhang CR, *et al.* 2022. *Blood Cancer Discov*. 3:220. [PubMed](#)
85. Zhang J, *et al.* 2015. *J Biol Chem*. 290 19093 . [PubMed](#)
86. Ley C, *et al.* 2015. *Cancer Cell*. 27: 631-43. [PubMed](#)
87. Keerthivasan S, *et al.* 2021. *Immunity*. 54(7):1511-1526.e8. [PubMed](#)
88. Celik H, *et al.* 2018. *Cancer Cell*. 34:741. [PubMed](#)
89. Kaplan I, *et al.* 2011. *J Immunol*. 186:2826. [PubMed](#)
90. Hoffmann J, *et al.* 2021. *Nat Commun*. 12:3964. [PubMed](#)
91. Fischer KC, *et al.* 2021. *Cell Death Dis*. 12:28. [PubMed](#)
92. Omatsu Y, *et al.* 2022. *Nat Commun*. 13:2654. [PubMed](#)
93. Alvarez S, *et al.* 2015. *Nat Commun*. 6: 8548. [PubMed](#)
94. Theocharides A, *et al.* 2012. *J Exp Med*. 209:1883. [PubMed](#)
95. He M, *et al.* 2020. *Cell Metabolism*. 31(3):580-591. [PubMed](#)
96. Xu C, *et al.* 2018. *Nat Commun*. 9:2449. [PubMed](#)
97. Soukup AA, *et al.* 2021. *Sci Adv*. 7:eabk3521. [PubMed](#)
98. Gao X, *et al.* 2021. *Nature*. 589:591. [PubMed](#)
99. DeVilbiss AW, *et al.* 2021. *eLife*. 10:00. [PubMed](#)
100. Xu W, *et al.* 2021. *Immunity*. 54(3):526-541.e7. [PubMed](#)
101. Yoshida H, *et al.* 2019. *Cell*. 176:897. [PubMed](#)
102. Magee JA, *et al.* 2021. *Stem Cell Reports*. 16:20. [PubMed](#)
103. Riedel SS, *et al.* 2021. *Molecular Cell*. 81(11):2332-2348.e9. [PubMed](#)
104. Matsuzaki Y, *et al.* 2015. *Biomed Rep*. 1: 91 - 97. [PubMed](#)
105. Woods B, *et al.* 2019. *Clin Cancer Res*. 25:5901. [PubMed](#)
106. Li K, *et al.* 2020. *Nat Commun*. 0.795138889. [PubMed](#)
107. Hidalgo San Jose L, *et al.* 2020. *Cell Rep*. 30:69. [PubMed](#)
108. Yamashita M, *et al.* 2019. *Cell Stem Cell*. 25:357. [PubMed](#)
109. Säwen P *et al.* 2018. *eLife*. 7 pii: e41258. [PubMed](#)
110. Luo H, *et al.* 2019. *Cell Rep*. 26:945. [PubMed](#)
111. Asada N, *et al.* 2017. *Nat Cell Biol*. 19:214-223. [PubMed](#)
112. Kang YA, *et al.* 2020. *J Exp Med*. 217:00:00. [PubMed](#)
113. Xie M, *et al.* 2020. *Haematologica*. . [PubMed](#)
114. Zhou J, *et al.* 2019. *Cell Stem Cell*. 24:285. [PubMed](#)
115. Fraser S, *et al.* 2007. *Blood*. 109:343. [PubMed](#)
116. Yang L, *et al.* 2021. *Front Immunol*. 12:722273. [PubMed](#)
117. Holzapfel B, *et al.* 2015. *Biomaterials*. 61: 103-114. [PubMed](#)
118. Tan DQ, *et al.* 2019. *Cell Rep*. 26:2316. [PubMed](#)
119. Man N, *et al.* 2021. *JCI Insight*. 6:. [PubMed](#)
120. Gu Z, *et al.* 2021. *Nat Genet*. 53:672. [PubMed](#)

RRID AB_313682 (BioLegend Cat. No. 115903)
 AB_313683 (BioLegend Cat. No. 115904)

Antigen Details

Structure	Ig superfamily, 75-95 kD
Distribution	Thymocytes, T cell subset, B lymphocytes, dendritic cells, endothelial cells
Function	B cell and dendritic cell costimulation
Ligand/Receptor	CD150
Cell Type	B cells, Dendritic cells, Endothelial cells, T cells, Thymocytes, Tregs
Biology Area	Costimulatory Molecules, Immunology, Innate Immunity
Molecular Family	Adhesion Molecules, CD Molecules
Antigen References	1. Cocks BG, <i>et al.</i> 1995. <i>Nature</i> 376:260.

- Punnonen J, et al. 1997. *J. Exp. Med.* 185:993.
- Sidorenko SP, et al. 1993. *J. Immunol.* 151:4614.

Gene ID [27218](#)

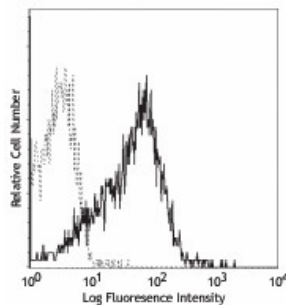
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

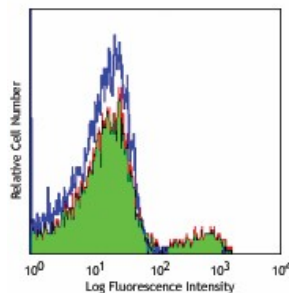
Other Formats

Purified anti-mouse CD150 (SLAM), PE anti-mouse CD150 (SLAM), Biotin anti-mouse CD150 (SLAM), APC anti-mouse CD150 (SLAM), PE/Cyanine5 anti-mouse CD150 (SLAM), PE/Cyanine7 anti-mouse CD150 (SLAM), Alexa Fluor® 488 anti-mouse CD150 (SLAM), Alexa Fluor® 647 anti-mouse CD150 (SLAM), PerCP/Cyanine5.5 anti-mouse CD150 (SLAM), Pacific Blue™ anti-mouse CD150 (SLAM), Brilliant Violet 421™ anti-mouse CD150 (SLAM), Brilliant Violet 605™ anti-mouse CD150 (SLAM), Brilliant Violet 510™ anti-mouse CD150 (SLAM), Brilliant Violet 650™ anti-mouse CD150 (SLAM), Purified anti-mouse CD150 (SLAM) (Maxpar® Ready), PE/Dazzle™ 594 anti-mouse CD150 (SLAM), Brilliant Violet 785™ anti-mouse CD150 (SLAM), APC/Fire™ 750 anti-mouse CD150 (SLAM), Brilliant Violet 711™ anti-mouse CD150 (SLAM), TotalSeq™-A0203 anti-mouse CD150 (SLAM), TotalSeq™-C0203 anti-mouse CD150 (SLAM), Ultra-LEAF™ Purified anti-mouse CD150 (SLAM), TotalSeq™-B0203 anti-mouse CD150 (SLAM)

Product Data



C57BL/6 mouse splenocytes were stained with CD150 (clone TC15-12F12.2) PE (solid line) or rat IgG2a PE isotype control (broken line).



C57BL/6 mouse bone marrow cells were stained with CD150 (clone TC15-12F12.2) PE (filled histogram) or rat IgG2a PE isotype control (open histogram) (gated on lymphoid cell population).

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, www.biolegend.com/ordering#license). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587