

TECHNICAL DATA SHEET

CyFlow™ CD28 Low Endotoxin Anti-Ms; Clone 37.51

REF CN951297

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

| | |
|------------------------------------|----------------------------------|
| Antigen | CD28 |
| Alternative Names | Tp44 |
| Clone | 37.51 |
| Clonality | monoclonal |
| Format | Low Endotoxin |
| Host / Isotype | Hamster / IgG |
| Species Reactivity | Mouse |
| Negative Species Reactivity | — |
| Quantity [Concentration] | 0.1 mg [1 mg/ml] |
| Immunogen | Mouse T cell lymphoma EL-4 cells |

Specificity

The Syrian hamster monoclonal antibody 37.51 recognizes extracellular domain of mouse CD28 costimulatory receptor, a 45 kDa homodimeric protein expressed by thymocytes, mature T cells and NK cells.

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Application

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

- Flow cytometry
- Immunoprecipitation
- Immunohistochemistry (frozen sections)
- Immunocytochemistry
- Functional assays

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

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|------------------|---|
| 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

CD28 is the critical T cell costimulatory receptor which provides to the cell the important second activation signal by binding CD80 and CD86 that are expressed by antigen presenting cells. Besides its costimulation role CD28 functions in preventing T cells from anergic hyporesponsive state or from undergoing premature apoptotic cell death. In murine peripheral lymphoid organs and in the blood, all CD4+ and CD8+ T cells express CD28. In the thymus, CD28 expression is highest on immature CD3-, CD8+ and CD4+8+ cells, and on CD4-8- cells that express α/β and γ/δ TCR. The level of CD28 on mature CD4+ and CD8+ α/β TCR+ thymocytes is two- to fourfold lower than on the immature cells.

References

- Harding FA, McArthur JG, Gross JA, Raulet DH, Allison JP: CD28-mediated signalling co-stimulates murine T cells and prevents induction of anergy in T-cell clones. *Nature*. 1992 Apr 16; 356(6370):607-9. < PMID: 1313950 >
- Gross JA, Callas E, Allison JP: Identification and distribution of the costimulatory receptor CD28 in the mouse. *J Immunol*. 1992 Jul 15; 149(2):380-8. < PMID: 1320641 >

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- Albert MH, Yu XZ, Martin PJ, Anasetti C: Prevention of lethal acute GVHD with an agonistic CD28 antibody and rapamycin. *Blood*. 2005 Feb 1; 105(3):1355-61. < PMID: 15459004 >
- Zhang N, He YW: The antiapoptotic protein Bcl-xL is dispensable for the development of effector and memory T lymphocytes. *J Immunol*. 2005 Jun 1; 174(11):6967-73. < PMID: 15905539 >
- Zhang N, He YW: An essential role for c-FLIP in the efficient development of mature T lymphocytes. *J Exp Med*. 2005 Aug 1; 202(3):395-404. < PMID: 16043517 >
- Perchonock CE, Fernando MC, Quinn WJ 3rd, Nguyen CT, Sun J, Shapiro MJ, Shapiro VS: Negative regulation of interleukin-2 and p38 mitogen-activated protein kinase during T-cell activation by the adaptor ALX. *Mol Cell Biol*. 2006 Aug; 26(16):6005-15. < PMID: 16880512 >
- Pua HH, Dzhagalov I, Chuck M, Mizushima N, He YW: A critical role for the autophagy gene Atg5 in T cell survival and proliferation. *J Exp Med*. 2007 Jan 22; 204(1):25-31. < PMID: 17190837 >
- Perchonock CE, Pajerowski AG, Nguyen C, Shapiro MJ, Shapiro VS: The related adaptors, adaptor in lymphocytes of unknown function X and Rlk/Irk-binding protein, have nonredundant functions in lymphocytes. *J Immunol*. 2007 Aug 1; 179(3):1768-75. < PMID: 17641043 >
- Rosenberger CM, Clark AE, Treuting PM, Johnson CD, Aderem A: ATF3 regulates MCMV infection in mice by modulating IFN-gamma expression in natural killer cells. *Proc Natl Acad Sci USA*. 2008 Feb 19; 105(7):2544-9. < PMID: 18268321 >
- Zhang N, Hopkins K, He YW: The long isoform of cellular FLIP is essential for T lymphocyte proliferation through an NF-kappaB-independent pathway. *J Immunol*. 2008 Apr 15; 180(8):5506-11. < PMID: 18390734 >

The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

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