

Technical Data Sheet

Purified NA/LE Rat Anti-Mouse CD25

Product Information

Material Number:	553864
Alternate Name:	Interleukin-2 receptor alpha chain; IL-2RA; IL-2R α ; IL2ra; IL-2R p55
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	PC61
Immunogen:	IL-2-dependent cytolytic mouse T-cell clone B6.1
Isotype:	Rat (OFA) IgG1, λ
Reactivity:	QC Testing: Mouse
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2 μ m sterile filtered. Endotoxin level is \leq 0.01 EU/ μ g (\leq 0.001 ng/ μ g) of protein as determined by the LAL assay.

Description

The PC61 monoclonal antibody specifically binds to CD25, the low-affinity IL-2 Receptor α chain (IL-2R α , p55) expressed on activated T and B lymphocytes from all mouse strains tested. IL-2R α by itself is not a signaling receptor. However, it can combine with IL-2 Receptor β (CD122) and γ c (CD132) chains to form high-affinity, signaling receptor complexes for IL-2. Resting T and B lymphocytes and resting and activated NK cells do not express IL-2R α . CD25 is transiently expressed at a low level during normal B-cell development in the bone marrow on the CD45R/B220low TdT- sIg- Pre-B/Pre-B-II and CD45R/B220low TdT- sIgM+ sIgD- immature B stages, but not on the CD45R/B220low TdT+ sIg- Pro-B/Pre-B-I stage nor on CD45R/B220high TdT- sIgM+ sIgD+ mature B cells. It is expressed at a higher level during a very early stage of T-cell development in fetal and adult thymus. Peripheral CD25+CD4+ lymphocytes called regulatory T (Treg) cells are involved in the maintenance of self-tolerance. It has also been reported that dendritic cells express CD25, recognized by mAb 7D4. The PC61 antibody recognizes an epitope of CD25 which is distinct from the IL-2 binding site and from those recognized by mAbs 3C7 and 7D4. It blocks binding of IL-2 to CD25, presumably by inducing a conformational change in CD25.

Preparation and Storage

Store undiluted at 4°C.

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Flow cytometry	Routinely Tested
Blocking	Reported

Recommended Assay Procedure:

Flow Cytometry: Investigators may also wish to consider using PE Rat Anti-Mouse CD25 (Cat. No. 553866) or Biotin Rat Anti-Mouse CD25 (Cat. No. 553069/550529) coupled with PE Streptavidin (Cat. No. 554061) for samples expressing low levels of CD25.

Immunohistochemistry: Investigators are encouraged to consider using Biotin Rat Anti-Mouse CD25 (Cat. No. 553069/550529) for the immunohistochemistry application.

Suggested Companion Products

Catalog Number	Name	Size	Clone
559157	Purified NA/LE Rat IgG1, λ Isotype Control	0.5 mg	A110-1
554016	FITC Goat Anti-Rat Ig	0.5 mg	Polyclonal
553866	PE Rat Anti-Mouse CD25	0.2 mg	PC61
553069	Biotin Rat Anti-Mouse CD25	0.1 mg	7D4
554061	PE Streptavidin	0.5 mg	(none)
550529	Biotin Rat Anti-Mouse CD25	1 mL	7D4
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

References

- Ceredig R, Lowenthal JW, Nabholz M, MacDonald HR. Expression of interleukin-2 receptors as a differentiation marker on intrathymic stem cells. *Nature*. 1985; 314(6006):98-100. (Clone-specific: Blocking, Immunohistochemistry, Immunoprecipitation)
- Chen J, Ma A, Young F, Alt FW. IL-2 receptor alpha chain expression during early B lymphocyte differentiation. *Int Immunol*. 1994; 6(8):1265-1268. (Biology)
- Crowley M, Inaba K, Witmer-Pack M, Steinman RM. The cell surface of mouse dendritic cells: FACS analyses of dendritic cells from different tissues including thymus. *Cell Immunol*. 1989; 118(1):108-125. (Biology)
- Garni-Wagner BA, Witte PL, Tutt MM, et al. Natural killer cells in the thymus. Studies in mice with severe combined immune deficiency. *J Immunol*. 1990; 144(3):796-803. (Biology)
- Godfrey DI, Zlotnik A. Control points in early T-cell development. *Immunol Today*. 1993; 14(11):547-553. (Biology)
- Lowenthal JW, Corthésy P, Tougne C, Lees R, MacDonald HR, Nabholz M. High and low affinity IL 2 receptors: analysis by IL 2 dissociation rate and reactivity with monoclonal anti-receptor antibody PC61. *J Immunol*. 1985; 135(6):3988-3994. (Immunogen: Blocking)
- Lowenthal JW, Zubler RH, Nabholz M, MacDonald HR. Similarities between interleukin-2 receptor number and affinity on activated B and T lymphocytes. *Nature*. 1985; 315(6021):669-672. (Clone-specific: Blocking, Immunoprecipitation)
- Moreau JL, Nabholz M, Diamantstein T, Malek T, Shevach E, Theze J. Monoclonal antibodies identify three epitope clusters on the mouse p55 subunit of the interleukin 2 receptor: relationship to the interleukin 2-binding site. *Eur J Immunol*. 1987; 17(7):929-935. (Clone-specific: Blocking)
- Pollard AM, Lipscomb MF. Characterization of murine lung dendritic cells: similarities to Langerhans cells and thymic dendritic cells. *J Exp Med*. 1990; 172(1):159-167. (Biology)
- Read S, Malmstrom V, Powrie F. Cytotoxic T lymphocyte-associated antigen 4 plays an essential role in the function of CD25(+)CD4(+) regulatory cells that control intestinal inflammation. *J Exp Med*. 2000; 192(2):295-302. (Biology)
- Rolink A, Grawunder U, Winkler TH, Karasuyama H, Melchers F. IL-2 receptor alpha chain (CD25, TAC) expression defines a crucial stage in pre-B cell development. *Int Immunol*. 1994; 6(8):1257-1264. (Biology)
- Takahashi T, Tagami T, Yamazaki S, et al. Immunologic self-tolerance maintained by CD25(+)CD4(+) regulatory T cells constitutively expressing cytotoxic T lymphocyte-associated antigen 4. *J Exp Med*. 2000; 192(2):303-309. (Clone-specific: Depletion)
- Taniguchi T, Minami Y. The IL-2/IL-2 receptor system: a current overview. *Cell*. 1993; 73(1):5-8. (Biology)