

Technical Data Sheet

Purified Rat Anti-Mouse CD25

Product Information

Material Number:	557425
Alternate Name:	Interleukin-2 receptor alpha chain; IL-2RA; IL-2R α ; IL2ra; IL-2R p55
Size:	0.1 mg
Concentration:	0.5 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:	Aqueous buffered solution containing \leq 0.09% sodium azide.

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 (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.

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

Application Notes

Application

Flow cytometry	Routinely Tested
Immunoprecipitation	Reported
Blocking	Reported
Depletion	Reported
Immunohistochemistry	Reported

Recommended Assay Procedure:

For detection of low-density CD25 expression, we recommend the use of the PE conjugate of PC61 antibody (Cat. No. 553866) or the biotin conjugate of the 7D4 antibody (Cat. No. 553069/553070) with a "bright" second-step reagent, such as Streptavidin-PE (Cat. No. 554061). For IHC, we recommend the use of biotinylated 7D4 mAb in our special formulation for immunohistochemistry, Cat. No. 550529. Since applications vary, each investigator must determine dilutions appropriate for individual use.

Suggested Companion Products

Catalog Number	Name	Size	Clone
553993	Purified Rat IgG1 λ Isotype Control	0.5 mg	A110-1
554016	FITC Goat Anti-Rat Ig	0.5 mg	Polyclonal
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
553866	PE Rat Anti-Mouse CD25	0.2 mg	PC61
553069	Biotin Rat Anti-Mouse CD25	0.1 mg	7D4
553070	Biotin Rat Anti-Mouse CD25	0.5 mg	7D4
554061	PE Streptavidin	0.5 mg	(none)
550529	Biotin Rat Anti-Mouse CD25	1 mL	7D4

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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. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
5. Please refer to www.bdbiosciences.com/pharming/en/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)