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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

PRODUCT INFORMATION



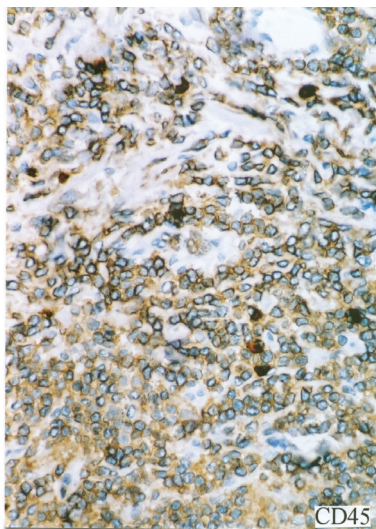
CD45 Monoclonal Antibody (Clone BRA-55)

Item No. 10004597

Overview and Properties

Contents:	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonyms:	LCA, Leukocyte Common Antigen, Ly-5, PTPRC
Immunogen:	Human CD45
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	500 µl PBS, pH 7.2, with 0.02% sodium azide
Clone:	BRA-55
Host:	Mouse
Isotype:	IgG1
Applications:	Flow cytometry (FC), immunocytochemistry (ICC), immunohistochemistry (IHC), and Western blot (WB); The optimal working concentration/dilution should be determined empirically.

Image



Immunoperoxidase detection of CD45 from lymph node; T cell non-Hodgkin's lymphoma (TNHL)

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

CD45 is a type I transmembrane glycoprotein that is encoded by the PTPRC gene in humans and is abundantly expressed on nucleated hematopoietic cells.¹ It contains an extracellular region that binds to glycoproteins and exists in various isoforms in a cell type-, differentiation state-, and activation state-dependent manner.^{1,2} CD45 also contains two highly conserved cytoplasmic protein tyrosine phosphatase domains that regulate intracellular signaling.¹ CD45 functions as a negative or positive regulator of antigen receptor signaling in T and B cells through dephosphorylation of Src family kinases in a cell type- and differentiation state-dependent manner.² It also dephosphorylates JAK kinases, inhibiting cytokine and chemokine signaling in leukocytes. Mutations in PTPRC are associated with severe combined immunodeficiency (SCID) in mice and humans.³⁻⁵ The number of CD45+ cells is increased in postmortem brain from patients with Alzheimer's disease.⁶ Increased levels of the CD45 isoform CD45RO have been found on CD19+ lamina propria B cells isolated from patients with Crohn's disease.² Fluorescently labeled versions of CD45 have commonly been used in flow cytometry as a pan leukocyte marker and to identify certain subsets of hematopoietic stem cells (HSCs).⁷ Cayman's CD45 Monoclonal Antibody (Clone BRA-55) can be used for flow cytometry (FC), immunocytochemistry (ICC), immunohistochemistry (IHC), and Western blot (WB) applications. The antibody recognizes CD45 at approximately 170 to 220 kDa from human samples.

References

1. Irie-Sasaki, J., Sasaki, T., and Penninger, J.M. CD45 regulated signaling pathways. *Curr. Top. Med. Chem.* **3**(7), 783-796 (2003).
2. Rheinländer, A., Schraven, B., and Bommhardt, U. CD45 in human physiology and clinical medicine. *Immunol. Lett.* **196**, 22-32 (2018).
3. Hermiston, M.L., Xu, Z., and Weiss, A. CD45: A critical regulator of signaling thresholds in immune cells. *Annu. Rev. Immunol.* **21**, 107-137 (2003).
4. Kung, C., Pingel, J.T., Heikinheimo, M., *et al.* Mutations in the tyrosine phosphatase CD45 gene in a child with severe combined immunodeficiency disease. *Nat. Med.* **6**(3), 343-345 (2000).
5. Tchilian, E.Z., Wallace, D.L., Wells, R.S., *et al.* A deletion in the gene encoding the CD45 antigen in a patient with SCID. *J. Immunol.* **166**(2), 1308-1313 (2001).
6. Hopperton, K.E., Mohammad, D., Trépanier, M.O., *et al.* Markers of microglia in post-mortem brain samples from patients with Alzheimer's disease: A systematic review. *Mol. Psychiatry* **23**(2), 177-198 (2018).
7. McKinney-Freeman, S.L., Naveiras, O., Yates, F., *et al.* Surface antigen phenotypes of hematopoietic stem cells from embryos and murine embryonic stem cells. *Blood* **114**(2), 268-278 (2009).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM