

CD45 (H-230): sc-25590

BACKGROUND

CD45 has been identified as a transmembrane glycoprotein, broadly expressed among hematopoietic cells. Eight isoforms of CD45 are distributed throughout the immune system according to cell type. The variation in these isoforms is localized to the extracellular domain of CD45, while the intracellular domain is conserved. CD45 functions as a phospho-tyrosine phosphatase, a vital component for efficient tyrosine phosphorylation induction by the TCR/CD3 complex. The tyrosine phosphatase activity of CD45 is contained within the conserved intracellular domain. Src and Syk family protein tyrosine kinases are utilized by the TCR/CD3 complex to initiate signaling cascades. Several members of these two families, including Lck, Fyn and Zap70, have been implicated as physiological substrates of CD45.

CHROMOSOMAL LOCATION

Genetic locus: PTPRC (human) mapping to 1q31.3; Ptprc (mouse) mapping to 1 E4.

SOURCE

CD45 (H-230) is a rabbit polyclonal antibody raised against amino acids 1075-1304 of CD45 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as agarose conjugate for immunoprecipitation, sc-25590 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

CD45 (H-230) is recommended for detection of CD45 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD45 siRNA (h): sc-29251, CD45 siRNA (m): sc-35001, CD45 shRNA Plasmid (h): sc-29251-SH, CD45 shRNA Plasmid (m): sc-35001-SH, CD45 shRNA (h) Lentiviral Particles: sc-29251-V and CD45 shRNA (m) Lentiviral Particles: sc-35001-V.

Molecular Weight of CD45: 180-220 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, BJAB whole cell lysate: sc-2207 or CCRF-CEM cell lysate: sc-2225.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

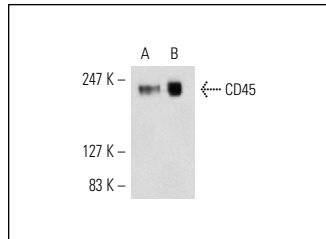
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

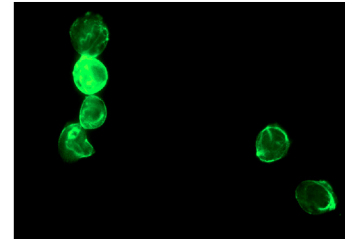
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



CD45 (H-230): sc-25590. Western blot analysis of CD45 expression in Jurkat (A) and CCRF-CEM (B) whole cell lysates.



CD45 (H-230): sc-25590. Immunofluorescence staining of methanol-fixed Jurkat cells showing membrane localization.

SELECT PRODUCT CITATIONS

- Akkoyunlu, G., et al. 2004. Distribution patterns of leucocyte subpopulations expressing different cell markers in the cumulus-oocyte complexes of pregnant and pseudopregnant mice. *Reprod. Fertil. Dev.* 15: 389-395.
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- Godfrey, R., et al. 2012. Cell transformation by FLT3 ITD in acute myeloid leukemia involves oxidative inactivation of the tumor suppressor protein-tyrosine phosphatase DEP-1/PTPRJ. *Blood* 119: 4499-4511.
- Pulido, M.R., et al. 2012. Nutritional, hormonal and depot-dependent regulation of the expression of the small GTPase Rab18 in rodent adipose tissue. *J. Mol. Endocrinol.* 50: 19-29.


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