

# CD5 (CD5/54/F6): sc-53204

## BACKGROUND

CD5 (also designated Lyt-1) has been identified as a transmembrane glycoprotein that is expressed on 70% of normal peripheral blood lymphocytes and on virtually all T lymphocytes in thymus and peripheral blood. Activation of T cells through the T cell receptor (TCR) results in tyrosine phosphorylation of CD5, and the absence of CD5 renders T cells hyper-responsive to TCR-mediated activation. CD5 associates with the TCR/CD3- $\zeta$  chain and with the Src family kinase Lck p56. *In vitro* studies have shown a 10- to 15-fold increase in the kinase activity of Lck bound to CD5. The B cell antigen, CD72, serves as a receptor for CD5. The consequence of CD5 binding to its cognate receptor is still in question and likely plays a role in thymic selection.

## CHROMOSOMAL LOCATION

Genetic locus: CD5 (human) mapping to 11q12.2; Cd5 (mouse) mapping to 19 A.

## SOURCE

CD5 (CD5/54/F6) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to the intracellular region of CD5 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD5 (CD5/54/F6) is available conjugated to agarose (sc-53204 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53204 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53204 PE), fluorescein (sc-53204 FITC), Alexa Fluor<sup>®</sup> 488 (sc-53204 AF488), Alexa Fluor<sup>®</sup> 546 (sc-53204 AF546), Alexa Fluor<sup>®</sup> 594 (sc-53204 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-53204 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-53204 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-53204 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

CD5 (CD5/54/F6) is recommended for detection of CD5 of mouse, rat, human, rabbit, equine and bovine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for CD5 siRNA (h): sc-35011, CD5 siRNA (m): sc-35010, CD5 shRNA Plasmid (h): sc-35011-SH, CD5 shRNA Plasmid (m): sc-35010-SH, CD5 shRNA (h) Lentiviral Particles: sc-35011-V and CD5 shRNA (m) Lentiviral Particles: sc-35010-V.

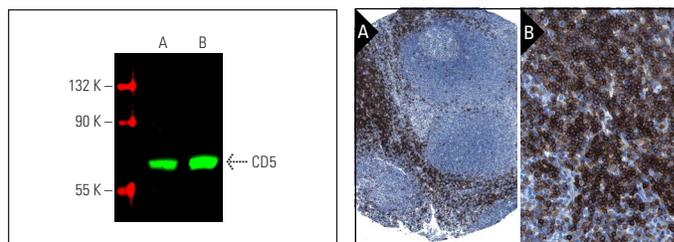
Molecular Weight of CD5: 67 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, ALL-SIL whole cell lysate: sc-364356 or MOLT-4 cell lysate: sc-2233.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



CD5 (CD5/54/F6) Alexa Fluor<sup>®</sup> 680: sc-53204 AF680. Direct near-infrared western blot analysis of CD5 expression in CCRF-CEM (A) and ALL-SIL (B) whole cell lysates. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214. Cruz Marker<sup>™</sup> Molecular Weight Standards detected with Cruz Marker<sup>™</sup> MW Tag-Alexa Fluor<sup>®</sup> 790: sc-516731.

CD5 (CD5/54/F6): sc-53204. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing membrane and cytoplasmic staining of lymphoid cells outside reaction centra at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

## SELECT PRODUCT CITATIONS

- Ma, X.B., et al. 2015. CD43 expression in diffuse large B-cell lymphoma, not otherwise specified: CD43 is a marker of adverse prognosis. *Hum. Pathol.* 46: 593-599.
- Ma, X.B., et al. 2018. Coexpression of CD5 and CD43 predicts worse prognosis in diffuse large B-cell lymphoma. *Cancer Med.* 7: 4284-4295.
- Bolognesi, M.M., et al. 2021. Antibodies validated for routinely processed tissues stain frozen sections unpredictably. *Biotechniques* 70: 137-148.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.