

# CD8 (32-M4): sc-1177

## BACKGROUND

The T cell receptor (TCR) is a heterodimer composed of either  $\alpha$  and  $\beta$  or  $\gamma$  and  $\delta$  chains. CD3 chains and the CD4 or CD8 co-receptors are also required for efficient signal transduction through the TCR. The TCR is expressed on T helper and T cytotoxic cells that can be distinguished by their expression of CD4 and CD8; T helper cells express CD4 proteins and T cytotoxic cells display CD8. CD8 (also designated Leu 2 or T8), a cell surface glycoprotein, is a two chain complex ( $\alpha\alpha$  or  $\alpha\beta$ ) receptor that binds class I MHC molecules presented by the antigen-presenting cell (APC). A primary function of CD8 is to facilitate antigen recognition by the TCR and to strengthen the avidity of the TCR-antigen interactions. An additional role for CD8-expressing T cells may be to maintain low levels of HIV expression.

## CHROMOSOMAL LOCATION

Genetic locus: CD8A/CD8B (human) mapping to 2p11.2, Cd8a/Cd8b1 (mouse) mapping to 6 C1.

## SOURCE

CD8 (32-M4) is a mouse monoclonal antibody raised against CD8 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD8 (32-M4) is available conjugated to agarose (sc-1177 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-1177 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-1177 PE), fluorescein (sc-1177 FITC), Alexa Fluor<sup>®</sup> 488 (sc-1177 AF488), Alexa Fluor<sup>®</sup> 546 (sc-1177 AF546), Alexa Fluor<sup>®</sup> 594 (sc-1177 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-1177 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-1177 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-1177 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, CD8 (32-M4) is available conjugated to APC (sc-1177 APC), 100 tests in 2 ml, for IF, IHC(P) and FCM.

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## APPLICATIONS

CD8 (32-M4) is recommended for detection of CD8 of mouse, rat and human 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 flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Molecular Weight of CD8 $\alpha$ /CD8 $\beta$ : 39/32 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208 or CCRF-CEM cell lysate: sc-2225.

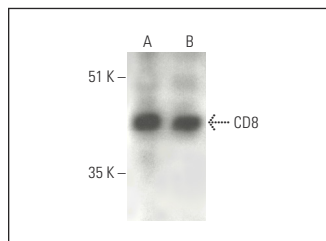
## PROTOCOLS

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

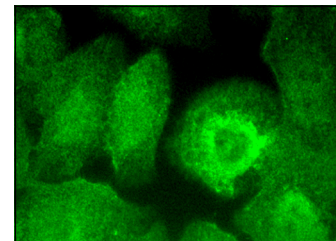
## STORAGE

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

## DATA



CD8 (32-M4) HRP: sc-1177 HRP. Direct western blot analysis of CD8 expression in HuT 78 (A) and CCRF-CEM (B) whole cell lysates.



CD8 (32-M4): sc-1177. Immunofluorescence staining of formalin-fixed A-431 cells showing membrane localization.

## SELECT PRODUCT CITATIONS

- Zheng, Y.H., et al. 2003. Nef increases the synthesis of and transports cholesterol to lipid rafts and HIV-1 progeny virions. *Proc. Natl. Acad. Sci. USA* 100: 8460-8465.
- Clement, M., et al. 2011. Anti-CD8 antibodies can trigger CD8<sup>+</sup> T cell effector function in the absence of TCR engagement and improve peptide-MHCI tetramer staining. *J. Immunol.* 187: 654-663.
- Chen, C., et al. 2017. Development of T cells carrying two complementary chimeric antigen receptors against glypican-3 and asialoglycoprotein receptor 1 for the treatment of hepatocellular carcinoma. *Cancer Immunol. Immunother.* 66: 475-489.
- Gulla, S.K., et al. 2018. Au-CGKRK nanoconjugates for combating cancer through T-cell-driven therapeutic RNA interference. *ACS Omega* 3: 8663-8676.
- Uscanga-Palomeque, A.C., et al. 2019. CD47 agonist peptide PKHB1 induces immunogenic cell death in T-cell acute lymphoblastic leukemia cells. *Cancer Sci.* 110: 256-268.
- Sil, P., et al. 2020. Non-canonical autophagy in dermal dendritic cells mediates immunosuppressive effects of UV exposure. *J. Allergy Clin. Immunol.* 145: 1389-1405.
- Pervaiz, N., et al. 2021. Immune-modulatory effects of lenalidomide inhibited the progression of lesions in a vitiligo mouse model. *Pigment Cell Melanoma Res.* 34: 918-927.
- Bahreyni, A., et al. 2022. A new miRNA-Modified coxsackievirus B3 inhibits triple negative breast cancer growth with improved safety profile in immunocompetent mice. *Cancer Lett.* 548: 215849.
- Chen, Q., et al. 2023. Hepatocyte growth factor-mediated apoptosis mechanisms of cytotoxic CD8<sup>+</sup> T cells in normal and cirrhotic livers. *Cell Death Discov.* 9: 13.

## RESEARCH USE

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