SANTA CRUZ BIOTECHNOLOGY, INC.

CD8-β (F-5): sc-25277

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The T cell receptor (TCR) is a heterodimer composed of either α and β or γ and δ 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 (αα or αβ) 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: CD8B (human) mapping to 2p11.2.

SOURCE

CD8-β (F-5) is a mouse monoclonal antibody epitope corresponding to amino acids 22-170 representing the extracellular domain of CD8-β chain of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD8-β (F-5) is available conjugated to agarose (sc-25277 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-25277 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-25277 PE), fluorescein (sc-25277 FITC), Alexa Fluor® 488 (sc-25277 AF488), Alexa Fluor® 546 (sc-25277 AF546), Alexa Fluor® 594 (sc-25277 AF594) or Alexa Fluor® 647 (sc-25277 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-25277 AF680) or Alexa Fluor® 790 (sc-25277 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

CD8-β (F-5) is recommended for detection of CD8-β chain of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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), immunohistochemistry (including paraffin-embedded sections) (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 CD8-β siRNA (h): sc-35029, CD8-β shRNA Plasmid (h): sc-35029-SH and CD8-β shRNA (h) Lentiviral Particles: sc-35029-V.

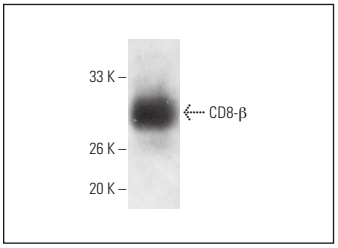
Molecular Weight of CD8-β: 32 kDa.

Positive Controls: SUP-T1 whole cell lysate: sc-364796, HuT 78 whole cell lysate: sc-2208 or CCRF-CEM cell lysate: sc-2225.

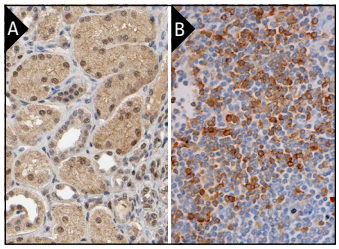
STORAGE

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

DATA



CD8-β (F-5): sc-25277. Western blot analysis of CD8-β expression in SUP-T1 whole cell lysate.



CD8-β (F-5): sc-25277. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic, membrane and nuclear staining of cells in glomeruli and tubuli. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**A**) and human spleen tissue showing membrane and cytoplasmic staining of subset of cells in red pulp (**B**).

SELECT PRODUCT CITATIONS

1. Ogembo, J.G., et al. 2012. SIRPα/CD172a and FHOD1 are unique markers of littoral cells, a recently evolved major cell population of red pulp of human spleen. J. Immunol. 188: 4496-4505.
2. Monteiro-Sepulveda, M., et al. 2015. Jejunal T cell inflammation in human obesity correlates with decreased enterocyte Insulin signaling. Cell Metab. 22: 113-124.
3. Tsuyama, N., et al. 2017. Clinical and prognostic significance of aberrant T-cell marker expression in 225 cases of *de novo* diffuse large B-cell lymphoma and 276 cases of other B-cell lymphomas. Oncotarget 8: 33487-33500.
4. Coffin, K.M., et al. 2018. Persistent Marburg Virus infection in the testes of nonhuman primate survivors. Cell Host Microbe 24: 405-416.e3.
5. Denti, V., et al. 2021. Lipidomic typing of colorectal cancer tissue containing tumour-infiltrating lymphocytes by MALDI mass spectrometry imaging. Metabolites 11: 599.
6. Casselbrant, A., et al. 2024. Intestinal ketogenesis and permeability. Int. J. Mol. Sci. 25: 6555.

PROTOCOLS

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