

CD8 (2.43): sc-18860

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, is a cell surface glycoprotein. It 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.

REFERENCES

1. Nakayama, K., et al. 1989. Structure and expression of the gene encoding CD8 α chain (Leu-2/T8). *Immunogenetics* 30: 393-397.
2. Zúñiga-Pflücker, J.C., et al. 1991. CD4 and CD8 act as co-receptors during thymic selection of the T cell repertoire. *Semin. Immunol.* 3: 167-175.
3. Fleury, S.G., et al. 1991. CD4 and CD8 recognition of class II and class I molecules of the major histocompatibility complex. *Semin. Immunol.* 3: 177-185.

CHROMOSOMAL LOCATION

Genetic locus: Cd8a/Cd8b1 (mouse) mapping to 6 C1.

SOURCE

CD8 (2.43) is a rat monoclonal antibody raised against CTL Clone L3 cells of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD8 (2.43) is available conjugated to either phycoerythrin (sc-18860 PE), fluorescein (sc-18860 FITC) or Alexa Fluor[®] 488 (sc-18860 AF488) or Alexa Fluor[®] 647 (sc-18860 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

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APPLICATIONS

CD8 (2.43) is recommended for detection of CD8 of mouse origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1×10^6 cells).

Molecular Weight of CD8- α : 39 kDa.

Molecular Weight of CD8- β : 32 kDa.

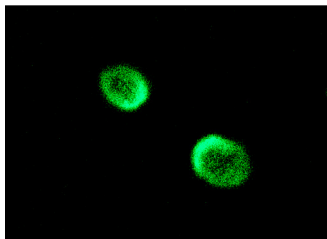
STORAGE

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

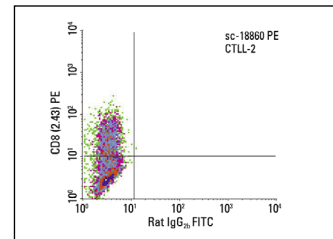
RESEARCH USE

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

DATA



CD8 (2.43): sc-18860. Immunofluorescence staining of methanol-fixed CTLL-2 cells showing membrane staining.



CD8 (2.43) PE: sc-18860 PE. FCM analysis of CTLL-2 cells. Quadrant markers were set based on the isotype control, normal rat IgG_{2b}-PE: sc-2873.

SELECT PRODUCT CITATIONS

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2. Park, K.H., et al. 2008. Insulin-like growth factor-binding protein-2 is a target for the immunomodulation of breast cancer. *Cancer Res.* 68: 8400-8409.
3. Atkinson, S.M., et al. 2012. Establishment and characterization of a sustained delayed-type hypersensitivity model with arthritic manifestations in C57BL/6J mice. *Arthritis Res. Ther.* 14: R134.
4. Kim, M.T., et al. 2015. Enhancing dendritic cell-based immunotherapy with IL-2/monoclonal antibody complexes for control of established tumors. *J. Immunol.* 195: 4537-4544.
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6. Liu, Q., et al. 2017. Distinctive roles for $\alpha 7^*$ - and $\alpha 9^*$ -nicotinic acetylcholine receptors in inflammatory and autoimmune responses in the murine experimental autoimmune encephalomyelitis model of multiple sclerosis. *Front. Cell. Neurosci.* 11: 287.
7. Soley, B.D.S., et al. 2020. B1 and B2 kinin receptor blockade improves psoriasis-like disease. *Br. J. Pharmacol.* 177: 3535-3551.
8. Shahgolzari, M., et al. 2021. Alfalfa mosaic virus nanoparticles-based *in situ* vaccination induces antitumor immune responses in breast cancer model. *Nanomedicine* 16: 97-107.
9. Acikgoz, E., et al. 2022. "Double hit" strategy: removal of sialic acid from the dendritic cell surface and loading with CD44+/CD24-/low cell lysate inhibits tumor growth and metastasis by targeting breast cancer stem cells. *Int. Immunopharmacol.* 107: 108684.

PROTOCOLS

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