## SANTA CRUZ BIOTECHNOLOGY, INC.

## CD8 (2.43): sc-18860



#### 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, 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  $\alpha$  chain (Leu-2/T8). Immunogenetics 30: 393-397.
- 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  $\mu g~lg G_{2b}$  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<sup>®</sup> 488 (sc-18860 AF488) or Alexa Fluor<sup>®</sup> 647 (sc-18860 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## **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  $\mu$ g per 1 x 10<sup>6</sup> cells).

Molecular Weight of CD8- $\alpha$ : 39 kDa.

Molecular Weight of CD8-6: 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 $lgG_{2b}\mbox{-}PE$ : sc-2873.

#### **SELECT PRODUCT CITATIONS**

- 1. Thumbikat, P., et al. 2006. Antigen-specific responses accelerate bacterial clearance in the bladder. J. Immunol. 176: 3080-3086.
- 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.
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- Mohamed, E.H., et al. 2016. Modulatory effects of levamisole and garlic oil on the immune response of Wistar rats: biochemical, immunohistochemical, molecular and immunological study. Mol. Med. Rep. 14: 2755-2763.
- 5. 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.
- Soley, B.D.S., et al. 2020. B1 and B2 kinin receptor blockade improves psoriasis-like disease. Br. J. Pharmacol. 177: 3535-3551.
- 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.
- 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.
- Zhang, J., et al. 2024. PAK4 is involved in the stabilization of PD-L1 and the resistance to doxorubicin in osteosarcoma and predicts the survival of diagnosed patients. Cells 13: 1444.

## PROTOCOLS

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