

# CD8 (UCH-T4): sc-1181



The Power to Question

## 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.

## REFERENCES

1. Nakayama, K., et al. 1989. Structure and expression of the gene encoding CD8  $\alpha$  chain (Leu-2/T8). *Immunogenetics* 30: 393-397.
2. Zuniga-Pflucker, 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.

## CHROMOSOMAL LOCATION

Genetic locus: CD8A/CD8B (human) mapping to 2p11.2.

## SOURCE

CD8 (UCH-T4) is a mouse monoclonal antibody raised against human thymocytes/Sezary T cells.

## 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 (UCH-T4) is available conjugated to agarose (sc-1181 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-1181 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-1181 PE), fluorescein (sc-1181 FITC), Alexa Fluor® 488 (sc-1181 AF488), Alexa Fluor® 546 (sc-1181 AF546), Alexa Fluor® 594 (sc-1181 AF594) or Alexa Fluor® 647 (sc-1181 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-1181 AF680) or Alexa Fluor® 790 (sc-1181 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, CD8 (UCH-T4) is available conjugated to Alexa Fluor® 405 (sc-1181 AF405, 200  $\mu$ g/ml), for IF, IHC(P) and FCM.

## APPLICATIONS

CD8 (UCH-T4) is recommended for detection of CD8 of human origin by 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per  $1 \times 10^6$  cells).

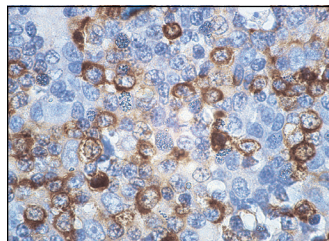
Molecular Weight of CD8- $\alpha$ : 39 kDa.

Molecular Weight of CD8- $\beta$ : 32 kDa.

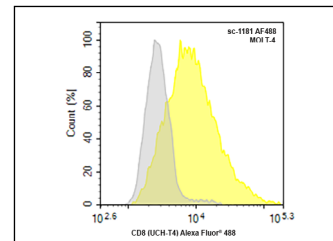
## STORAGE

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

## DATA



CD8 (UCH-T4): sc-1181. Immunoperoxidase staining of formalin-fixed, paraffin-embedded normal human tonsil showing membrane staining of lymphocytes.



CD8 (UCH-T4) Alexa Fluor® 488: sc-1181 AF488. FCM analysis of MOLT-4 cells. Gray histogram represents the isotype control, normal mouse IgG<sub>2a</sub>: sc-3891.

## SELECT PRODUCT CITATIONS

1. Martín, A.P., et al. 2002. Vascular endothelium express CS-1 Fibronectin in allergic contact dermatitis. *J. Cutan. Pathol.* 29: 347-353.
2. Waleh, N., et al. 2011. Anatomic closure of the premature patent ductus arteriosus: the role of CD14<sup>+</sup>/CD163<sup>+</sup> mononuclear cells and VEGF in neointimal mound formation. *Pediatr. Res.* 70: 332-338.
3. Bull, M.E., et al. 2014. HIV-1 shedding from the female genital tract is associated with increased Th1 cytokines/chemokines that maintain tissue homeostasis and proportions of CD8<sup>+</sup>FOXP3<sup>+</sup> T cells. *J. Acquir. Immune Defic. Syndr.* 67: 357-364.
4. Liao, R., et al. 2016. Systemic and intratumoral balances between monocytes/macrophages and lymphocytes predict prognosis in hepatocellular carcinoma patients after surgery. *Oncotarget* 7: 30951-30961.
5. He, J., et al. 2017. PEDF plus DHA modulate inflammation and stimulate nerve regeneration after HSV-1 infection. *Exp. Eye Res.* 161: 153-162.
6. Akbalik, M.E., et al. 2018. Tissue distribution of some immune cells in bovine reproductive tract during follicular and luteal phase. *Microsc. Res. Tech.* 81: 315-331.
7. Li, Z., et al. 2020. Brain transforms natural killer cells that exacerbate brain edema after intracerebral hemorrhage. *J. Exp. Med.* 217: e20200213.
8. Gao, Q., et al. 2021. Serum-derived exosomes promote CD8<sup>+</sup> T cells to overexpress PD-1, affecting the prognosis of hypopharyngeal carcinoma. *Cancer Cell Int.* 21: 584.
9. Renga, G., et al. 2022. Optimizing therapeutic outcomes of immune checkpoint blockade by a microbial tryptophan metabolite. *J. Immunother. Cancer* 10: e003725.

## RESEARCH USE

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

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