

CD8- α (6A242): sc-70802

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 ($\alpha\alpha$ 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. 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 (mouse) mapping to 6 C1.

SOURCE

CD8- α (6A242) is a mouse monoclonal antibody raised against thymocyte membrane glycoproteins of rat origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for blocking, sc-70802 L, 200 μ g/0.1 ml.

CD8- α (6A242) is available conjugated to either phycoerythrin (sc-70802 PE) or fluorescein (sc-70802 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

RESEARCH USE

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

APPLICATIONS

CD8- α (6A242) is recommended for detection of CD8- α of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for CD8- α siRNA (m): sc-43677, CD8- α shRNA Plasmid (m): sc-43677-SH and CD8- α shRNA (m) Lentiviral Particles: sc-43677-V.

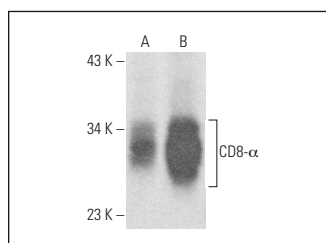
Molecular Weight of CD8- α : 39 kDa.

Positive Controls: rat spleen extract: sc-2397 or rat thymus extract: sc-2401.

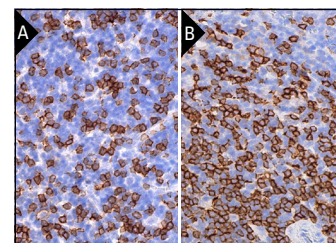
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CD8- α (6A242): sc-70802. Western blot analysis of CD8- α expression in rat spleen (A) and rat thymus (B) tissue extracts.



CD8- α (6A242): sc-70802. Immunoperoxidase staining of formalin fixed, paraffin-embedded rat lymph node tissue showing membrane and cytoplasmic staining of subset of cells in non-germinal center (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat spleen tissue showing membrane and cytoplasmic staining of cells in white pulp and subset of cells in red pulp (B).

SELECT PRODUCT CITATIONS

1. Lei, F., et al. 2011. *In vivo* programming of tumor antigen-specific T lymphocytes from pluripotent stem cells to promote cancer immunosurveillance. *Cancer Res.* 71: 4742-4747.
2. Haque, R., et al. 2012. Programming of regulatory T cells from pluripotent stem cells and prevention of autoimmunity. *J. Immunol.* 189: 1228-1236.
3. Zhao, X., et al. 2019. Saikosaponin A inhibits breast cancer by regulating Th1/Th2 balance. *Front. Pharmacol.* 10: 624.
4. Haque, M., et al. 2019. Stem cell-derived tissue-associated regulatory T cells suppress the activity of pathogenic cells in autoimmune diabetes. *JCI Insight* 4: e126471.
5. Mahmoud, H.S., et al. 2021. The effect of dietary supplementation with *Nigella sativa* (black seeds) mediates immunological function in male Wistar rats. *Sci. Rep.* 11: 7542.
6. Sun, Y.F., et al. 2021. Dissecting spatial heterogeneity and the immune-evasion mechanism of CTCs by single-cell RNA-seq in hepatocellular carcinoma. *Nat. Commun.* 12: 4091.

STORAGE

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