

CD8- α (OX8): sc-53063

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 (CD8- α and CD8- β) 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 proteins; T helper cells express CD4 proteins and T cytotoxic cells display CD8 proteins. CD8s are cell surface glycoproteins that exist as two chain complex ($\alpha\alpha$ or $\alpha\beta$) receptors that bind class I MHC molecules presented by the antigen-presenting cell (APC). A primary function of CD8 proteins 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: Cd8a (mouse) mapping to 6 C1.

SOURCE

CD8- α (OX8) 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-53063 L, 200 μ g/0.1 ml.

CD8- α (OX8) is available conjugated to agarose (sc-53063 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53063 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53063 PE), fluorescein (sc-53063 FITC), Alexa Fluor[®] 488 (sc-53063 AF488), Alexa Fluor[®] 546 (sc-53063 AF546), Alexa Fluor[®] 594 (sc-53063 AF594) or Alexa Fluor[®] 647 (sc-53063 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-53063 AF680) or Alexa Fluor[®] 790 (sc-53063 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD8- α (OX8) 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 PBL whole cell lysate.

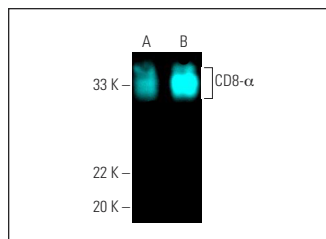
STORAGE

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

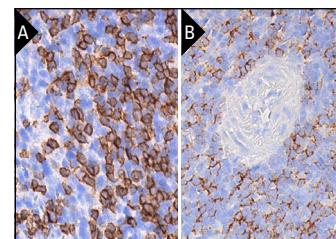
RESEARCH USE

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

DATA



CD8- α (OX8) Alexa Fluor[®] 647: sc-53063 AF647. Direct fluorescent western blot analysis of CD8- α expression in rat spleen tissue extract (A) and rat PBL whole cell lysate (B). Blocked with UltraCruz[®] Blocking Reagent: sc-516214.



CD8- α (OX8): sc-53063. Immunoperoxidase staining of formalin fixed, paraffin-embedded rat spleen tissue showing membrane and cytoplasmic staining of cells in red pulp (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat spleen tissue showing membrane staining of cells in red pulp. Blocked with 0.25X UltraCruz[®] Blocking Reagent: sc-516214. Detection reagents used: m-IgGk BP-B: sc-516142 and ImmunoCruz[®] ABC Kit: sc-516216 (B).

SELECT PRODUCT CITATIONS

- Kupfer, R., et al. 2007. Loss of a gimap/ian gene leads to activation of NF κ B through a MAPK-dependent pathway. *Mol. Immunol.* 44: 479-487.
- Santra, L., et al. 2014. Non-structural protein 1 (NS1) gene of canine parvovirus-2 regresses chemically induced skin tumors in Wistar rats. *Res. Vet. Sci.* 97: 292-296.
- Chen, P.Y., et al. 2015. Focused ultrasound-induced blood-brain barrier opening to enhance interleukin-12 delivery for brain tumor immunotherapy: a preclinical feasibility study. *J. Transl. Med.* 13: 93.
- Happe, C.M., et al. 2016. Pneumonectomy combined with SU5416 induces severe pulmonary hypertension in rats. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 310: L1088-L1097.
- Messner, F., et al. 2020. Mechanical irritation in vascularized composite tissue allotransplantation triggers localized skin rejection. *Transplantation* 104: 956-969.
- Alfaro-Arnedo, E., et al. 2022. IGF1R acts as a cancer-promoting factor in the tumor microenvironment facilitating lung metastasis implantation and progression. *Oncogene* 41: 3625-3639.
- Xu, C., et al. 2023. Sex differences in genomic features of hepatitis B associated hepatocellular carcinoma with distinct antitumor immunity. *Cell. Mol. Gastroenterol. Hepatol.* 15: 327-354.

PROTOCOLS

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

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