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 (αα or αβ) 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


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 µg IgG2a 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 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-1181 HRP), 200 µg/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 µg/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 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, CD8 (UCH-T4) is available conjugated to Alexa Fluor® 405 (sc-1181 AF405), 100 µg/2 µl, for IF, IHC(P) and FCM.

APPLICATIONS

CD8 (UCH-T4) is recommended for detection of CD8 of human origin by immunoprecipitation [1-2 µg per 100-500 µg 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 µg per 1 x 10^6 cells).

Molecular Weight of CD8-α: 39 kDa.
Molecular Weight of CD8-β: 32 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:


DATA

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

CD8 (UCH-T4) PE: sc-1181 PE. FCM analysis of CRF-CEM cells. Black line histogram represents the isotype control, normal mouse IgG2a-PE: sc-2867.

SELECT PRODUCT CITATIONS


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.

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