

# Monoclonal Antibody CD8 $\beta$

PN IM2014 – Purified – Freeze-dried – 0.2 mg – Clone 2ST8.5H7

**For Research Use Only. Not for use in diagnostic procedures.**

## SPECIFICITY

CD8 is an heterodimer composed of two polypeptide chains  $\alpha$  and  $\beta$  with molecular weight of 32-34 kDa each. They form homodimeric (CD8 $\alpha/\alpha$ ) or heterodimeric (CD8 $\alpha/\beta$ ) cell surface complexes (1).

The 2ST8.5H7 monoclonal antibody (mAb) recognizes an epitope of the CD8 $\beta$  molecule that depends upon the expression of both CD8 $\alpha$  and CD8 $\beta$  chains (1-3).

Four distinct subpopulations of CD8 $^+$  cells have been identified based on the expression of CD8 $\alpha/\alpha$  or CD8 $\alpha/\beta$  complexes (1):

- TCR $\alpha/\beta$  $^+$  T cells which are CD8 $\alpha^+/\beta^+$

- TCR $\alpha/\beta$  $^+$  T cells which are CD8 $\alpha^+/\beta^-$

- TCR $\gamma/\delta$  $^+$  T cells which are CD8 $\alpha^+/\beta^-$

- NK cells which are CD8 $\alpha^+/\beta^-$

Moreover both CD8 $\alpha/\alpha$  and CD8 $\alpha/\beta$  complexes may coexist on the cell surface.

The 2ST8.5H7 mAb immunoprecipitates the human complex CD8 $\alpha/\beta$  (30-32 kDa) from cell lines expressing the  $\alpha$  and  $\beta$  cDNA (2).

It has been studied at the fifth International Workshop on Human Leukocyte Differentiation Antigens held in Boston (1993) (3, 4).

## REAGENT

Monoclonal Antibody CD8 $\beta$   
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**Clone** 2ST8.5H7

**Isotype** IgG2a (Kappa)

**Species** Mouse

**Immunogen** Normal human T cells

**Hybridoma** Myeloma NS1 x Balb/c spleen cells

**Source** Ascites fluid

**Purification** Ion exchange or affinity chromatography

**Buffer** 1 mg/mL bovine serum albumin in phosphate-buffered saline

## APPLICATION

Studies of CD8 $\beta$  positive cells.  
Flow cytometry,

## STATEMENT OF WARNINGS

1. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
2. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use antibody beyond the expiration date on the label.
4. Avoid microbial contamination of reagents or incorrect results might occur.
5. Use good laboratory practices when handling this reagent.

## STORAGE CONDITIONS AND

### STABILITY

This freeze-dried form may be stored at 2 – 8°C until the expiration date stated on the vial label.

No preservative has been added.

## REAGENT PREPARATION

Depending of usage, reconstitute with 1 mL of distilled water, with or without 0.1% sodium azide (w/v).

The reconstituted form including 0.1% sodium azide may be stored for up to one month at 2 – 8°C.

The reconstituted form without sodium azide can be stored at –20°C or less, until the expiration date stated on the vial label.

In this case, aliquotting is recommended to avoid multiple freezing / thawing cycles.

## PROCEDURE

For each application, it is recommended to establish the right range of antibody dilutions to be used for the experiment.

## SELECTED RESEARCH

### REFERENCES

1. Terry, L.A., DiSanto, J.P., Small, T.N., Flomenberg, N., "Differential expression and regulation of the human CD8 $\alpha$  and CD8 $\beta$  chains", 1990, Tissue Antigens, 35, 82-91.
2. DiSanto, J.P., Terry, L.A., Flomenberg, N., "Generation of anti-human CD8 $\beta$ -specific antibodies using transfectants expressing mixed-species CD8 heterodimers", 1991, J. Immunol. Methods, 141, 123-131.
3. Alcover, A., "CD8 cluster report", 1995, in Leucocyte Typing V, White Cell Differentiation Antigens, Schlossman, S.F., et al., Eds., Oxford Univ. Press, p. 353-354.
4. Knowles, R.W., "Immunochemical analysis of the T cell-specific antigens", 1985, in Leucocyte Typing II, 1, Human T lymphocytes, Reinherz, E.L., et al., Eds., Springer-Verlag New York inc., 1985, p. 260-288.

## PRODUCT AVAILABILITY

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For additional information in the USA, call 800-526-7694.

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