

## DESCRIPTION

<b>Species Reactivity</b>	Cotton Rat
<b>Specificity</b>	Detects cotton rat CD8 $\alpha$ in direct ELISAs. In direct ELISAs, approximately 45% cross-reactivity with recombinant canine CD8, approximately 17% cross-reactivity with recombinant guinea pig CD8 $\alpha$ , and less than 2% cross-reactivity with recombinant mouse CD8 $\alpha$
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant cotton rat CD8 $\alpha$ Ser24-Asp182 Accession # AAL55392
<b>Conjugate</b>	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
<b>Formulation</b>	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

<b>CyTOF-ready</b>	Optimal dilution of this antibody should be experimentally determined.
<b>Flow Cytometry</b>	Optimal dilution of this antibody should be experimentally determined.

## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

## BACKGROUND

CD8 alpha (CD8 $\alpha$ ; also OX8, Leu-2 and Lyt-2) is a 23 kDa (predicted) member of the Ig superfamily of molecules. It is found on immature thymocytes, cytotoxic and suppressor T cells, select mast cells, and splenic plus bone marrow dendritic cells (in rodent). On T cells, CD8 $\alpha$  exists as either a disulfide linked homodimer, or heterodimer bound to CD8 $\beta$ . CD8 $\alpha\beta$  is best known as a coreceptor for the TCR, enhancing TCR signaling. CD8 $\alpha$  serves a different function and acts as a TCR corepressor that blocks T cell activation. Based on rat, mature *Sigmodon hispidus*/cotton rat CD8 $\alpha$  is a 210 amino acid (aa) type I transmembrane protein. It will possess a 161 aa extracellular region (aa 24-184) that contains one V-type Ig-like domain (aa 35-135), and a 30 aa cytoplasmic tail (aa 206-235). Although *Sigmodon hispidus* is called a rat, it is not. It is a rodent, and rat CD8 $\alpha$  is the closest ortholog to cotton rat CD8 $\alpha$  currently reported. Over the extracellular region, rat and cotton rat CD8 $\alpha$  share only 54% aa identity. Rat CD8 $\alpha$  runs at 34-39 kDa in SDS-PAGE, and possesses one utilized N-linked and O-linked glycosylation site (vs. no N-linked sites in cotton rat CD8 $\alpha$ ). Based on this organization, and assuming O-linked glycosylation, cotton rat CD8 $\alpha$  would be expected to run at about 30-34 kDa in SDS-PAGE. Over aa 24-182, cotton rat CD8 $\alpha$  shares 54% and 48% aa identity with rat and mouse CD8 $\alpha$ , respectively.

## PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.