

DESCRIPTION

Species Reactivity	Cotton Rat
Specificity	Detects cotton rat CD8α in direct ELISAs. In direct ELISAs, approximately 45% cross-reactivity with recombinant canine CD8, approximately 17% cross-reactivity with recombinant guinea pig CD8α, and less than 2% cross-reactivity with recombinant mouse CD8α
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant cotton rat CD8α Ser24-Asp182 Accession # AAL55392
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	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.

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Flow Cytometry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

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

BACKGROUND

CD8 alpha (CD8α; 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, CD8α exists as either a disulfide linked homodimer, or heterodimer bound to CD8β. CD8αβ is best known as a coreceptor for the TCR, enhancing TCR signaling. CD8αα serves a different function and acts as a TCR corepressor that blocks T cell activation. Based on rat, mature *Sigmodon hispidus*/cotton rat CD8α 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 CD8α is the closest ortholog to cotton rat CD8α currently reported. Over the extracellular region, rat and cotton rat CD8α share only 54% aa identity. Rat CD8α 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 CD8α). Based on this organization, and assuming O-linked glycosylation, cotton rat CD8α would be expected to run at about 30-34 kDa in SDS-PAGE. Over aa 24-182, cotton rat CD8α shares 54% and 48% aa identity with rat and mouse CD8α, respectively.

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