

#### DESCRIPTION

<b>Species Reactivity</b>	Cotton Rat
<b>Specificity</b>	Detects cotton rat CD8 $\alpha$ in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # JG12
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	NIH-3T3 mouse embryonic fibroblast cell line transfected with cotton rat CD8 $\alpha$ and SP2/O mouse melanoma cell line transfected with cotton rat CD8 $\alpha$ . Accession # AAL55392
<b>Conjugate</b>	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
<b>Formulation</b>	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *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.

	Recommended Concentration	Sample
<b>Flow Cytometry</b>	0.25-1 $\mu$ g/10 <sup>6</sup> cells	Cotton rat splenocytes

#### 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>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

#### 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 and 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 that consists of a 161 aa extracellular region (aa 24-184) with 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

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