

DESCRIPTION

Species Reactivity	Cotton Rat
Specificity	Detects cotton rat CD8 α in direct ELISAs.
Source	Monoclonal Mouse IgG _{2A} Clone # JG12
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	NIH-3T3 mouse embryonic fibroblast cell line transfected with cotton rat CD8 α and SP2/O mouse melanoma cell line transfected with cotton rat CD8 α . Accession # AAL55392
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	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
Flow Cytometry	0.25-1 μ g/10 ⁶ cells	Cotton rat splenocytes

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

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