

#### DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse SLAM/CD150.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 459911
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse SLAM/CD150 Thr25-Pro242 Accession # Q9QUM4
<b>Conjugate</b>	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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 µg/10 <sup>6</sup> cells	PMA and Ca <sup>2+</sup> ionomycin-treated mouse 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> ● 12 months from date of receipt, 2 to 8 °C as supplied.

#### BACKGROUND

The type I transmembrane glycoprotein Signaling Lymphocytic Activation Molecule (SLAM), also known as CD150, is the prototypic member of the SLAM subgroup of the CD2 protein family. CD2 family proteins function as adhesion molecules and modulators of the immune response (1). Mouse SLAM consists of a 218 amino acid (aa) extracellular domain (ECD) with two Ig-like domains, a 23 aa transmembrane segment, and a 78 aa cytoplasmic domain with three immunoreceptor tyrosine switch motifs (ITSM) (2). Alternate splicing generates an isoform with a substituted cytoplasmic domain (2). Within the ECD, mouse SLAM shares 58% and 83% aa sequence identity with human and rat SLAM, respectively. It is expressed as a 75 kDa molecule of which approximately 30 kDa is N-linked carbohydrate (2). SLAM is expressed on T cells, B cells, thymocytes, macrophages, dendritic cells, platelets, and hematopoietic stem cells (2-7). It is upregulated on activated B cells and CD4<sup>+</sup> and CD8<sup>+</sup> T cells, although it is downregulated on Th2 polarized cells (2, 3, 8). SLAM interacts homophilically with low affinity, and this interaction induces a Th0/Th1 response characterized by clonal expansion, production of IFN-γ, and increased cytolytic activity of CD8<sup>+</sup> T cells (2, 3, 9-11). SLAM ligation also promotes B cell activation, allergen-induced eosinophil and mast cell activation, and macrophage responsiveness to LPS (4, 8, 12). In humans, SLAM functions as a cellular entry receptor for measles virus (13, 14).

#### References:

1. Ma, C.S. *et al.* (2007) *Annu. Rev. Immunol.* **25**:337.
2. Castro, A.G. *et al.* (1999) *J. Immunol.* **163**:5860.
3. Cocks, B.G. *et al.* (1995) *Nature* **376**:260.
4. Wang, N. *et al.* (2004) *J. Exp. Med.* **199**:1255.
5. Hahm, B. *et al.* (2004) *Virology* **323**:292.
6. Nanda, N. *et al.* (2005) *Blood* **106**:3028.
7. Kiel, M.J. *et al.* (2005) *Cell* **121**:1109.
8. Punnonen, J. *et al.* (1997) *J. Exp. Med.* **185**:993.
9. Mavaddat, N. *et al.* (2000) *J. Biol. Chem.* **275**:28100.
10. Aversa, G. *et al.* (1997) *J. Immunol.* **158**:4036.
11. Mehrle, S. *et al.* (2008) *Mol. Immunol.* **45**:796.
12. Wang, N. *et al.* (2006) *Am. J. Respir. Cell Mol. Biol.* **35**:206.
13. Tatsuo, H. *et al.* (2000) *Nature* **406**:893.
14. Hsu, E.C. *et al.* (2001) *Virology* **279**:9.

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