

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Rae-1 γ as well as mouse Rae-1 α , 1 β , 1 δ and 1 ϵ in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Rae-1 γ Leu29-Ser231 Accession # O08604
Endotoxin Level	<0.10 EU per 1 μ g of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

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
Western Blot	0.1 μ g/mL	Recombinant Mouse Rae-1 γ Fc Chimera (Catalog # 1136-RA)
Immunohistochemistry	5-15 μ g/mL	Immersion fixed frozen sections of mouse embryo (E13)
Blockade of Receptor-ligand Interaction	In a functional ELISA, 0.2-0.6 μ g/mL of this antibody will block 50% of the binding of 125 ng/mL of Recombinant Biotinylated Mouse NKG2D Fc Chimera to immobilized Recombinant Mouse Rae-1 γ Fc Chimera (Catalog # 1136-RA) coated at 1 μ g/mL (100 μ L/well). At 4 μ g/mL, this antibody will block >90% of the binding.	

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Rae-1 γ is a member of a family of cell-surface proteins that function as ligands for mouse NKG2D. Other family members are designated Rae-1 α , 1 β , 1 δ and 1 ϵ . Amino acid sequence identity within this family ranges from 88-95%. The Rae-1 proteins are distantly related to MHC class I proteins, but they possess only the α 1 and α 2 Ig-like domains, and they have no capacity to bind peptide or interact with β 2-microglobulin. The genes encoding these proteins are not found within the Major Histocompatibility Complex on mouse chromosome 17, but rather map to mouse chromosome 10. The Rae-1 proteins are anchored to the membrane via a GPI-linkage. The name of this family derives from the original identification of these proteins as the product of retinoic acid early inducible transcripts. Rae-1 expression is developmentally controlled. Transcripts were observed in the brain/head region of day 10-14 embryos but disappeared by day 18. Rae-1 transcripts were detected in several transformed cell lines but are absent from most normal adult tissues. All Rae-1 family members bind to mouse NKG2D, an activating receptor expressed on NK cells and some T cell subsets, resulting in the activation of cytolytic activity and/or cytokine production by these effector cells. Ectopic expression of Rae-1 on mouse tumor cell lines resulted in the *in vivo* rejection of the tumors (1-6).

References:

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2. Diefenbach, A. *et al.* (2000) Nature Immunol. **1**:119.
3. Cerwenka, A. *et al.* (2000) Immunity **12**:721.
4. Cerwenka, A. *et al.* (2001) Proc. Natl. Acad. Sci. USA **98**:11521.
5. Diefenbach, A. *et al.* (2001) Nature **413**:165.
6. NKG2D and its Ligands, www.RnDSystems.com.