

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived		
	Mouse Rae-1 γ (Leu29 - Ser231) Accession # O08604	IEGRMD	Human IgG ₁ (Pro100 - Lys330)
	N-terminus		C-terminus

N-terminal Sequence Analysis	Leu29
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	49.5 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	68-82 kDa, reducing conditions
Activity	Measured by the ability of the protein to bind immobilized rmNKG2D/Fc Chimera in a functional ELISA.
Endotoxin Level	<0.10 EU per 1 μ g of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 μ g/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. ● 3 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 , β , δ and 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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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.