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Mouse 4-1BB Ligand/TNFSF9 Antibody

Antigen Affinity-purified Polyclonal Goat IgG Catalog Number: AF1246

RDSYSTEMS

DESCRIPTION		
Species Reactivity	Mouse	
Specificity	Detects mouse 4-1BB Ligand/TNFSF9 in direct ELISAs and Western blots. In Western blots, approximatley 5% cross-reactivity with recombinant mouse (rm) Fas Ligand is observed and less than 1% cross-reactivity with rmOX40 Ligand, rmTWEAK, rmTRAIL, and rmTNF-α is observed.	
Source	Polyclonal Goat IgG	
Purification	Antigen Affinity-purified	
Immunogen	S. <i>frugiperda</i> insect ovarian cell line <i>Sf</i> 21-derived recombinant mouse 4-1BB Ligand/TNFSF9 Arg104-Glu309 Accession # P41274	
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.	

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 μg/mL	Recombinant Mouse 4-1BB Ligand/TNFSF9 (Catalog # 1246-4L)		

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.	
	 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

4-1BB ligand (4-1BBL) is a type II transmembrane glycoprotein belonging to the TNF superfamily (TNFSF) and has been designated TNFSF9. Mouse 4-1BBL cDNA encodes a 309 amino acid residues (aa) protein with an 82 aa N-terminal cytoplasmic domain, a 21 aa transmembrane domain and a 206 aa C-terminal extracellular domain. The extracellular domain of 4-1BBL has a tertiary structure similar to that of other TNFSF members, but shares only low aa sequence homology (14-16%). Murine 4-1BBL shares 36% aa sequence identity with its human counterpart (1, 2). 4-1BBL is predominantly expressed on activated antigen presenting cells (APCs) such as B cells, macrophages and dendritic cells (DCs). It is also expressed on most T and B lymphoma cell lines (3). A soluble 4-1BBL is released from the cell surface following cellular activation via proteolytic cleavage by one or more sheddases (4). By analogy to other TNFSF ligands, both the soluble and transmembrane 4-1BBL are expected to exist as non-covalent homotrimers. 4-1BBL binds 4-1BB, a TNF receptor superfamily member, TNFRSF9, which is also known as CD137 and ILA (induced by lymphocyte activation). 4-1BB is expressed on activated CD4⁺ and CD8⁺ T cells, thymocytes, and NK cells. It is also expressed on monocytes, neutrophils, DCs and eosinophils. In response to 4-1BBL binding, 4-1BB transduces a T cell costimulatory signal in both CD4⁺ and CD8⁺ T cells to promote survival and enhance proliferation, cytokine production and effector function. In dendritic cells, 4-1BB is a DC-activating molecule that enhances cytokine production and up-

References:

1. Goodwin, R.G. et al. (1993) Eur. J. Immunol. 23:2631.

regulates expression of B7-1 and B7-2 costimulatory molecules (3)

- 2. Alderson, M.R. et al. (1994) Eur. J. Immunol. 24:2219.
- 3. Kwon, B., H.W. Lee and B.S Kwon (2002) TRENDS in Immunology 23:378.
- 4. Salih, H.R. et al. (2001) J. Immunol. 167:4059.

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