

**DESCRIPTION**

<b>Source</b>	Mouse myeloma cell line, NS0-derived			
	MHHHHHHHHH	GGSGGGSGGGS	IEGR	Mouse CD27 Ligand (Gln47 - Pro195) Accession # Q05A52
	N-terminus			C-terminus

**N-terminal Sequence Met**

**Analysis**

**Predicted Molecular Mass** 19.2 kDa

**SPECIFICATIONS**

<b>SDS-PAGE</b>	30 kDa, reducing conditions
<b>Activity</b>	Measured by its ability to stimulate mouse T cell proliferation in the presence of anti-CD3. The ED <sub>50</sub> for this effect is 1.25-5.0 µg/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 100 µg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

CD27 ligand (CD27L), also named CD70, is a type II transmembrane glycoprotein belonging to the TNF superfamily (TNFSF) and has been designated TNFSF7 (1, 2). Mouse CD27L cDNA encodes a 195 amino acid (aa) residue protein with a 23 aa N-terminal cytoplasmic domain, a 21 transmembrane domain and a 151 aa C-terminal extracellular domain. Mouse and human CD27L share approximated 56% aa sequence identity. By analogy to other TNFSF ligands, CD27L is expected to exist as non-covalent homotrimers. The expression of CD27L is highly regulated at the transcription and posttranslational level (3). CD27L cell surface expression is induced by antigen receptor activation in B cells and at low levels in mouse T cells. Although CD27L expression is not detected on human dendritic cells (DC), membrane expression on mature mouse DCs has been reported. CD27L expression is also present in the thymus medulla in both human and mouse. CD27L interacts with CD27, a member of the TNF receptor superfamily that is expressed on natural killer (NK) cells and subsets of T and B cells (2, 4, 5). Ligation of CD27 on T cells provides costimulatory signals that are required for T cell proliferation, clonal expansion and the promotion of effector T cell formation (2). Ligation of CD27 on mouse B cell has been shown to inhibit terminal differentiation of activated B cells into plasma cells and enhances commitment to memory B cell responses (5, 6). On NK cells, ligation of CD27 induces proliferation and IFN-γ production (4).

**References:**

1. Hitzen, R.Q. *et al.* (1994) *Immunol. Today* **15**:307.
2. Croft, M. (2003) *Nature Reviews Immunol.* **3**:609.
3. Tesselaar, K. *et al.* (2003) *J. Immunol.* **169**:33.
4. Takeda, K. *et al.* (2000) *J. Immunol.* **164**:1741.
5. Kobata, T.S. *et al.* (1995) *Proc. Natl. Acad. Sci. USA* **92**:11249.
6. Raman, V.S. *et al.* (2003) *J. Immunol.* **171**:5876.