**Description**

Mouse myeloma cell line, NS0-derived

<table>
<thead>
<tr>
<th>Source</th>
<th>Mouse MAdCAM-1 (Gln22 - Thr365)</th>
<th>Accession # NP_038619</th>
<th>IEGRMD</th>
<th>Human IgG1 (Pro100 - Lys330)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-terminus</td>
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<tr>
<td>C-terminus</td>
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</tbody>
</table>

**N-terminal Sequence Analysis**

No results obtained: Gln22 predicted

**Structure / Form**

Disulfide-linked homodimer

**Predicted Molecular Mass**

63 kDa (monomer)

**Specifications**

**SDS-PAGE**

85-95 kDa, reducing conditions

**Activity**

Measured by the ability of the immobilized protein to support the adhesion of HuT 78 human cutaneous T cell lymphoma cells. When 5 x 10^4 cells/well are added to mouse MAdCAM-1/Fc Chimera coated plates (10 µg/mL with 100 µL/well), approximately 80-90% will adhere after MnCl_2 stimulation for 1 hour incubation at room temperature.

**Optimal dilutions should be determined by each laboratory for each application.**

**Endotoxin Level**

<0.10 EU per 1 µg of the protein by the LAL method.

**Purity**

>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

**Formulation**

Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**Preparation and Storage**

**Reconstitution**

Reconstitute at 100 µg/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.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

**Background**

Mucosal addressin cell adhesion molecule-1 (MAdCAM-1) is an immunoglobulin (Ig) cell adhesion molecule family member. In addition to Ig domains, it contains a mucin-like domain and a membrane proximal domain with similarity to IgA. MAdCAM-1 is involved in lymphocyte homing to mucosal sites and is expressed on high endothelial venules (HEV) of both mesenteric lymph nodes and Peyer's patches. It has also been found to be expressed on sinus-lining cells of the spleen. The integrin, α_4β_7, has been shown to function as the MAdCAM-1 receptor. The Ig domains of MAdCAM-1 have been found to be critical to α_4β_7 binding. The mucin domain has been shown to have activity in L-Selectin binding. MAdCAM-1 expression has been demonstrated to be up-regulated by TNF-α and IL-1β. MAdCAM-1 appears to play a role in inflammatory bowel disease (IBD) as its expression is highly up-regulated in IBD and most likely serves to recruit α_4β_7-expressing lymphocytes to the region. In vivo studies involving nonobese diabetic (NOD) mice have also suggested that MAdCAM-1/α_4β_7 interaction plays a role in diabetes development in this model. Mouse MAdCAM-1 is a 405 amino acid (aa) residue protein with a 21 aa signal sequence, a 344 aa extracellular domain, a 20 aa transmembrane domain and a 29 aa cytoplasmic domain.

**References:**