

## DESCRIPTION

|                           |   |
|---------------------------|---|
| <b>Species Reactivity</b> | Mouse   |
| <b>Specificity</b>        | Detects mouse VCAM-1 in direct ELISAs and Western blots. Does not cross-react with recombinant human (rh) VCAM-1, rmlCAM-1, rhICAM-2, rmlCAM-2, rhICAM-3, or rhPECAM.                   |
| <b>Source</b>             | Monoclonal Rat IgG <sub>1</sub> Clone # 112702  |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant  |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant mouse VCAM-1<br>Phe25-Glu698<br>Accession # P29533  |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

## 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   |
|---------------------|---------------------------|--|
| <b>Western Blot</b> | 1 µg/mL                   | Recombinant Mouse VCAM-1/CD106 Fc Chimera (Catalog # 643-VM) |

## PREPARATION AND STORAGE

|                                |   |
|--------------------------------|---|
| <b>Reconstitution</b>          | Reconstitute at 0.5 mg/mL in sterile PBS.   |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C  |
| <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>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

## BACKGROUND

VCAM-1 (CD106), a member of the immunoglobulin superfamily, is a cell surface protein expressed by activated endothelial cells and certain leukocytes (such as macrophages). VCAM-1 expression is induced by IL-1β, IL-4, TNF-α, and IFN-γ. VCAM-1 binds to leukocyte integrins VLA-4 and α<sub>4</sub>β<sub>7</sub>. The human and mouse VCAM-1 proteins share approximately 76% amino acid similarity.

During the inflammatory adhesion mechanism, activated integrins halt rolling leukocytes and attach them firmly to the vascular endothelium. They do this by binding to their ligands, for example VCAM-1, on endothelium. The VCAM-1: VLA-4/α<sub>4</sub>β<sub>7</sub> interaction is also thought to be involved in the extravasation of white blood cells through the blood vessel wall to sites of inflammation.

ELISA techniques have shown that detectable levels of soluble VCAM-1 are present in the biological fluids of apparently normal individuals. Furthermore, a number of studies have reported that levels of VCAM-1 may be elevated or lowered in subjects with a variety of pathological conditions.