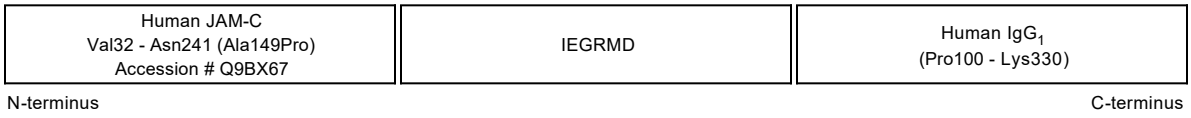
Recombinant Human JAM-C Fc Chimera

Catalog Number: 1189-J3

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived



N-terminal Sequence Analysis	Val32
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	50 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	60-65 kDa, reducing conditions
Activity	Measured by its ability to inhibit the adhesion of J45.01 human acute lymphoblastic leukemia T lymphocytes on immobilized JAM-2 (VE-JAM)/Fc Chimera. When 0.2 µg/mL (100 µL/well) of rhJAM-B/Fc Chimera is immobilized on goat anti-human IgG Fc Chimera antibody coated wells, the ED_{50} for this effect is 0.1-0.5 µg/mL in the presence of 1 x 10^5 cells/well.
Endotoxin Level	<0.10 EU per 1 µg 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 µm filtered solution in Tris-Citrate and NaCl. 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

The family of juctional adhesion molecules (JAM), comprising at least three members, are type I transmembrane receptors belonging to the immunoglobulin (Ig) superfamily (1, 2). These proteins are localized in the tight junctions between endothelial cells or epithelial cells. Some family members are also found on blood leukocytes and platelets. Human JAM-C cDNA predicts a 310 amino acid (aa) residue precursor protein with a putative 31 aa signal peptide, a 210 aa extracellular region containing two Ig domains, a 23 aa transmembrane domain and a 46 aa cytoplasmic domain containing a PDZ-binding motif and a PKC phosphorylation site (3, 4). Human JAM-C shares 86% aa sequence identity with its mouse homologue. It also shares approximately 36% and 32% aa sequence homology with human JAM-B and JAM-A, respectively (3 - 5). Human JAM-C shows widespread tissue expression and the highest levels are found in the placenta, brain, kidney and heart. JAM-C is expressed on endothelial cells of high endothelial venules in human tonsil. It is also expressed on platelets, T-cells and NK cells (3 - 5). Unlike other JAM family members, JAM-C forms only weak homotypic interactions. JAM-C binds to JAM-B to facilitate the interactions between JAM-B and the integrin alpha4beta1 (6). This heterotypic interaction between leukocyte JAM-C and endothelial JAM-B may play a role in regulating leukocyte transmigration (5). On platelets, JAM-C is a counter-receptor for the leukocyte integrin Mac-1(CD11b/CD18) (7). JAM-C has also been identified as a strong candidate gene for hypoplastic left heart syndrome (8).

The nomenclature used for the JAM family proteins is confusing. VE-JAM has been referred to in the literature variously as JAM-B or JAM-C. Until further clarification, R&D Systems has adopted the nomenclature where both mouse and human VE-JAM are referred to as JAM-B. Under this system, JAM-C refers to the protein encoded by the gene localized to human chromosome 11.

References:

1. Chavakis, T. *et al.* (2003) Thromb. Haemost. **89**:13.
2. Aurand-Lions, M. *et al.* (2001) Blood **98**:3699.
3. Arrate, M.P. *et al.* (2001) J. Biol. Chem. **276**:45826.
4. Liang, T. *et al.* (2002) J. Immunol. **168**:1618.
5. Johnson-Leger, C. *et al.* (2002) Blood **100**:25793.
6. Cunningham, A. *et al.* (2002) J Biol. Chem. **277**:27589.
7. Santoso, S. *et al.* (2002) J. Exp. Med. **196**:679.
8. Phillips, H.M. *et al.* (2002) Genomics **79**:475.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449