Title (en)

VASCULAR ADHESION PROTEIN-1 HAVING AMINE OXIDASE ACTIVITY

Title (de)

VASKULÄRES ADHESIONSPROTEIN-1MIT AMINOXIDASEAKTIVITÄT.

Title (fr)

PROTEINE-1 D'ADHESION VASCULAIRE A ACTIVITE MONOAMINE-OXYDASE

Publication

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Application

EP 98922815 A 19980522

Priority

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Abstract (en)

[origin: WO9853049A1] VAP-1 is an endothelial sialoglycoprotein whose cell surface expression is induced under inflammatory conditions. It has previously been shown to mediate the binding of recirculating lymphocytes to human peripheral lymph node vascular endothelial cells in an L-selectin independent fashion. A VAP-1 cDNA has been purified and shown to encode a type II transmembrane protein of 84.6 KD with a single transmembrane domain located at the very N-terminal end of the molecule. VAP-1 exists, in vivo, predominantly as a dimer of 170-180 KD. Six potential N-linked glycosylation sites are located in the extracellular domain, as are three putative O-glycosylation sites. VAP-1 has no significant similarity to any currently known adhesion molecules but has significant identity to the copper-containing amine oxidase family. Enzyme assays have defined VAP-1 as a membrane-bound amine oxidase. Thus, VAP-1 is a new type of adhesion molecule with dual functions. With the appropriate glycosylation, and in the correct inflammatory setting, VAP-1 expression on the lumenal endothelial cell surface in locations mediating lymphocyte adhesion allows it to function as an adhesion receptor involved in a novel mechanism of lymphocyte homing. Its primary function in other locations may depend on its inherent amine oxidase activity.

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C12N 9/06; C07K 14/435

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