

JAML Protein, Human, Recombinant (His)

General Information

Synonyms:	CREA7-1;Gm638;AMICA;adhesion molecule, interacts with CXADR antigen 1;JAML;CREA7-4
Protein Construction:	A DNA sequence encoding the human JAML (NP_001091996.1) extracellular domain (Met 1-Leu 275) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Leu 20
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q86YT9-1
Molecular Weight:	30.5 kDa (predicted); 43 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:
It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:
In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Junctional adhesion molecules (JAMs) are endothelial and epithelial adhesion molecules involved in the recruitment of circulating leukocytes to inflammatory sites. JAML (Junctional adhesion molecule-like), also known as AMICA1 (Adhesion molecule interacting with CXADR antigen 1), a protein related to the JAM family, is restricted to leukocytes and promotes their adhesion to endothelial cells. It contains 2 extracellular immunoglobulin-like domains, a transmembrane segment, and a cytoplasmic tail involved in activation signaling. Monocytic

JAML/AMICA1 plays a critical role in regulating monocyte transendothelial migration (TEM) probably via binding to the endothelial coxsackie and adenovirus receptor (CAR) and other tight junction-associated adhesive molecules. The Expression of JAML/AMICA1 is restricted to the hematopoietic tissues with the exception of liver. JAML may function in transmigration of leukocytes through epithelial and endothelial tissues. Expressed at the plasma membrane of polymorphonuclear leukocytes, JAML/AMICA1 also enhances myeloid leukemia cell adhesion to endothelial cells.

Reference

- Moog-Lutz C, et al. (2003) JAML, a novel protein with characteristics of a junctional adhesion molecule, is induced during differentiation of myeloid leukemia cells. *Blood*. 102(9): 3371-8.
- Luissint AC, et al. (2008) JAM-L-mediated leukocyte adhesion to endothelial cells is regulated in cis by alpha4beta1 integrin activation. *J Cell Biol*. 183(6): 1159-73.
- Guo YL, et al. (2009) Role of junctional adhesion molecule-like protein in mediating monocyte transendothelial migration. *Arterioscler Thromb Vasc Biol*. 29(1): 75-83.

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