Recombinant Human ASAM

Catalog Number: 5019-AM

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived Gly18-Met233, with a C-terminal 6-His tag Accession # Q9H6B4
N-terminal Sequence Analysis	Gly18
Predicted Molecular Mass	25.2 kDa

SPECIFICATIONS

SDS-PAGE	33-37 kDa, reducing conditions
Activity	Measured by the ability of the immobilized protein to support the adhesion of SVEC4-10 mouse vascular endothelial cells. When 4 x 10^4 cells/well are added to Recombinant Human ASAM coated plates (30 µg/mL, 100 µL/well), approximately 25%-50% will adhere after one hour at 37 °C. **Optimal dilutions should be determined by each laboratory for each application.**
Endotoxin Level	<1.0 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

Adipocyte-specific adhesion molecule (ASAM), also known as ACAM and coxsackie- and adenovirus receptor-like membrane protein (CLMP), is a type I transmembrane protein and member of the CTX family within the immunoglobulin superfamily. Mature human ASAM consists of a 217 amino acid (aa) extracellular region, a 21 aa transmembrane region, and a 117 aa cytoplasmic tail. The extracellular region contains one V-type and one C-type immunoglobulin domain connected by a J segment (1, 2). Within the ECD, human ASAM shares 97% aa sequence identity with mouse and rat ASAM. ASAM is widely expressed as 44 kDa and 48 kDa species in epithelial tissues where it localizes to tight junctions (1, 3). It mediates cell-cell adhesion and contributes to trans-epithelial resistance (1). It is down-regulated in Sertoli cells by TNF-α which also inhibits the expression of several other tight junction proteins in seminiferous tubules (4, 5). ASAM is additionally expressed by mature adipocytes and is up-regulated in white adipose tissue under conditions of obesity (2).

References:

1. Raschperger *et al.* (2004) J. Biol. Chem. **279**:796.
2. Eguchi, J. *et al.* (2005) Biochem. J. **387**:343.
3. Sze, K.-L. *et al.* (2008) J. Cell Physiol **214**:334.
4. Sze, K.-L. *et al.* (2008) Biochem. J. **410**:575.
5. Li, M.W. *et al.* (2006) J. Endocrinol. **190**:313.

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