Version 25-02/25

User's Manual

sVAP-1 ELISA Kit

REF DEIABL380

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RUO

This product is for research use only and is not intended for diagnostic use.

For illustrative purposes only. To perform the assay the instructions for use provided with the kit have to be used.

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PRODUCT INFORMATION

Intended Use

The sVAP-1 ELISA is an enzyme-linked immunosorbent assay for the quantitative detection of human VAP-1.

The human VAP-1 ELISA is for research use only. Not for diagnostic or therapeutic procedures.

General Description

The ability of leukocytes to extravasate from the vasculature to the tissue space is a fundamental feature of the normal immune system. Several cell adhesion molecules play a key role in this complex process of initial and stable adhesion and diapedesis of leukocytes across the endothelial barrier. Vascular adhesion protein-1 (VAP-1) is one of the endothelial cell adhesion molecules that mediates lymphocyte binding to the endothelium under shear conditions. It is constitutively expressed mainly in high endothelial venules in peripheral lymph nodes. The expression of VAP-1 is induced by chronic inflammation in the vessels of the tonsil, gut, skin and synovium. VAP-1 is also present on sinusoidal and vascular endothelium in the liver under both normal and inflammatory conditions, however it is not found on any of the blood leukocytes. VAP-1 expression has furthermore been shown in human cervix and vagina mucosa. In psoriasis and allergic lesions, VAP-1 is markedly upregulated. The mature VAP-1 molecule is a 170 kDa homodimeric glycoprotein that consists of two 90 kDa subunits held together by disulfide bonds. VAP-1 has a large extracellular domain, a single-pass transmembrane domain, and a short cytoplasmic tail. The molecule has abundant sialic acid decorations that are essential to its adhesive function, because VAP-1 is unable to mediate lymphocyte adhesion to desialylated vessels. The leukocyte ligand for VAP-1 is currently unknown. Induction of VAP-1 has been shown at sites of inflam-mation, such as in inflammatory bowel diseases and chronic dermatoses, where expression of VAP-1 is clearly increased. It is constitutively expressed on hepatic endothelium playing a critical role in regulation of T-cell recirculation to the liver. Strong expression of VAP-1 on tumor endothelium distinguishes human hepatocellular carcinomas from colorectal hepatic metastases. A circulating form of human Vascular Adhesion Protein-1 (sVAP-1) has been characterized. This sVAP-1 has been shown to be elevated in sera of patients with certain liver diseases and a correlation with the diagnosis of the patients was demonstrated.

Storage

2-8°C

Precision

Intra-assay

Sample	Experiment	Mean Human VAP-1 Concentration (ng/ml)	Coefficient of Variation (%)
1	1	363.5	1.9
	2	367.2	4.1
	3	358.1	4.7
2	1	345.3	1.2
	2	396.9	3.7
	3	343.1	4.1
3	1	282.8	2.9
	2	271.9	1.2
	3	267.4	9.0
4	1	208.0	2.0
	2	197.4	4.2
	3	221.2	5.1
5	1	303.0	0.4
	2	282.6	1.6
	3	287.6	4.5
6	1	409.6	3.0
	2	386.6	2.1
	3	398.1	2.5
7	1	297.4	0.4
	2	296.3	0.7
	3	295.8	0.6
8	1	192.9	1.4
	2	207.0	8.2
	3	236.6	2.9

Inter-assay

Sample	Mean Human VAP-1 Concentration (ng/ml)	Coefficient of Variation (%)
1	362.9	1.3
2	361.8	8.4
3	274.1	2.9
4	208.9	5.7
5	291.1	3.7
6	398.1	2.9
7	296.5	0.3
8	212.2	10.5

Detection Range

31.3 - 2000 pg/mL

Sensitivity

19 pg/ml