



Daresbury Proteins

Product description

Page | 1

Name: Recombinant Human Soluble Vascular Adhesion Protein-1, sVAP-1

Synonyms: Membrane primary amine oxidase, Copper amine oxidase, HPAO, Semicarbazide-sensitive amine oxidase (SSAO), Vascular adhesion protein 1 (VAP-1).

Species: Human

Source: HEK293

Amino Acids: 29-763

Tag: 10xHis at the N terminus. Also available as a tag-free version (please inquire).

Predicted Molecular Weight: 83 kDa

Protein ID: Q16853

Sequence:

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HHHHHHHHHHHSGGDGGEPSQLPHCPSVSPSAQPWTHPGQSQLEFADLSREELTAVMRFLTQRLGPGLVDAAQARPSDNCVFSV
ELQLPPKAAALAHLDGRSPPPAREALAIVFFGRQPQPNVSELVVGPLPHPSYMRDVTVERHGGPLPYHRRPVLFQEYLDIDQM
IFNRELPOASGLLHHCCFYKHRGRNLVTMTTAPRGLQSGDRATWFGLYYNI SGAGFFL
HHVGLELLVNHKALD PARWTIQKVFYQGRYDSLALQLEAQFEAGLVNVVLI PDNGTGGSWSLKSPVPPGPAPPLQFYPOGPRF
SVQGSRVASSLWTF SFGLGAFSGPRI FDVRFQGERLVYEISLQALAIYGGNSPAAMTTRYVDGGFGMGKYTTPLTRGVDCPY
LATYVDWHFLLESQAPKTIRDAFCVFEQNQGLPLRRHSDLYSHYFGGLAETVLVVRSMSTLLNYDYVWDTVFHPSGAIEIRF
YATGYISSAFLFGATGKYGNQVSEHTLGTVHTHSAHFVLDLVAGLENWVW
AEDMVFPMAVPWSPHQQLQRLQVTRKLLMEMEEQAFLVGSATPRYLILASNHSNKWGHPRGYRIQMLSFAGEPLPQNSSMAR
GFSWERYQLAVTQRKEEPPSSSVFNQNDPWAPTVD FSDFINNETIAGKDLVAWVTAGFLHI PHAEDI PNTVTVGNGVGFFLR
PYNFFDEDPSFY SADSIFRGDQDAGACEVNP LACL PQAAACAPDLPAF SHGGF SHN
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Product specifications

Daresbury Proteins Ltd. A company registered in England, UK. Company number 10835544.

Address: Daresbury Labs, Keckwick Lane, Warrington WA4 4AD, United Kingdom.

Web address: www.daresburyproteins.co.uk Tel: +44 7398 623734 Email: myprotein@daresburyproteins.co.uk

Estimated Molecular Weight, SDS-PAGE: ≈ 100 kDa

Grade & Purity: >95% as estimated by SDS-PAGE stained with Instant Blue Stain (Expedeon).

Endotoxins: Less than 0.1 ng/ μ g (1 IEU/ μ g), as measured by LAL method.

Formulation: PBS 20% Glycerol

Shipping

Product is shipped either on dry or wet ice. Upon receipt, store at -20°C to -70°C.

Product application and Storage

Storage: The protein should be stored at -20°C to -70°C preferably in small aliquots to avoid repeated freeze-thaw cycles.

Stability: At least 12 months at -20°C to -70°C and at least 1 month at 2°C to 8°C.

Application Note: For research purposes only. Not for use in humans.

Background Information

Cell adhesion protein that participates in lymphocyte extravasation and recirculation by mediating the binding of lymphocytes to peripheral lymph node vascular endothelial cells in an L-selectin-independent fashion (1, 2). Has semicarbazide-sensitive (SSAO) monoamine oxidase activity (3, 4). May play a role in adipogenesis.

Page | 3

Strongly expressed on the high endothelial venules of peripheral lymph nodes and on hepatic endothelia. Also highly expressed in appendix, lung and small intestine. Expressed also in adipose tissue, in bone marrow, colon, heart, kidney, ovary, pancreas, placenta, prostate, skeletal muscle, spleen and testis.

The soluble form of VAP-1 is released into the circulation mainly from vascular endothelial cells. Over- and under-expression of sVAP-1 result in alterations of the reported reaction product levels, which are involved in the pathogenesis of multiple human diseases (5, 6).

Publications: A tag-free version of this product has been used in the following publication:

Heuts DPHM., Gummadova JO., Pang JY., Rigby SEJ. and NS. Scrutton. *Reaction of Vascular Adhesion Protein-1 (VAP-1) with Primary Amines: Mechanistic Insights from Isotope Effects and Quantitative Structure-Activity Relationships*. Journal of Biological Chemistry. Vol. 286, No 34, pp 29584-29593. 2011.

References:

1. Smith et al. (1998) *J. Exp. Med.*, 17-27
2. Kaitaniemi et al. (2013) *PLoS ONE*, E54151
3. Bour et al. (2007) *Biochimie*, 916-925
4. Kaitaniemi et al. (2009) *Cell. Mol. Life Sci.*, 2743-2757
5. Pannecoeck et al. (2015) *Crit. Rev. Clin. Lab. Sci.*, 284-300
6. Aalto et al. (2012) *Arterioscler. Thromb. Vasc. Biol.*, 523-532