# Phospho-VAV1 (Tyr160) Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

## PRODUCT OVERVIEW

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| **Product Name** | VAV1, Blocking Peptide |
| **Full Product Name** | Phospho-VAV1 (Tyr160) Blocking Peptide |
| **Product Gene Name** | VAV1 blocking peptide |
| **Product Synonym Names** | Oncogene vav; p95Vav; Proto-oncogene vav; Protooncogene vav; VAV 1; VAV 1 oncogene; VAV; Vav proto oncogene; VAV_HUMAN; VAV1 |
| **Form/Format** | Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml. |
| **Purity/Purification** | The purity is >90%,tested by HPLC and MS. |
| **Preparation and Storage** | Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C. |
| **Antibody/Peptide Pairs** | VAV1 (Tyr160) peptide (MBS9618984) is used for blocking the activity of VAV1 (Tyr160) antibody (MBS9614022) |
| **Molecular Weight** | 98,314 Da |
| **Chromosome Location** | Chromosome: 19; NC_000019.9 (6772679..6857377). Location: 19p13.2 |
| **OMIM** | 164875 |
| **Supply Chain Verification** | Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire. |
| **Notes** | For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg) |
| **ISO Certification** | Manufactured in an ISO 9001:2015 Certified Laboratory. |
| **Applications Tested/Suitable for VAV1 blocking peptide** | Blocking/Control |
| **Related Product Information for VAV1 blocking peptide** | Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody. |
| **Other Notes** | Small volumes of VAV1 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for VAV1 purchase** | MBS9618984 is a blocking peptide targeting VAV1. Also known as Phospho-VAV1 (Tyr160) Blocking Peptide. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for VAV1. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 7108367 |
| **NCBI GeneID** | 7409 |
| **NCBI Accession #** | NP_005419.2 |
| **UniProt Primary Accession #** | P15498 |

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| **UniProt Secondary Accession #** | Q15860 |
| **UniProt Related Accession #** | P15498 |
| **GenBank Nucleotide #** | NM_005428.3 |
| **NCBI Official Full Name** | proto-oncogene vav isoform 1 |
| **NCBI Official Synonym Full Names** | vav 1 guanine nucleotide exchange factor |
| **NCBI Official Symbol** | VAV1 |
| **NCBI Official Synonym Symbols** | VAV |
| **UniProt Protein Name** | Proto-oncogene vav |
| **Protein Family** | Proto-oncogene |
| **UniProt Gene Name** | VAV1 |
| **UniProt Synonym Gene Names** | VAV |
| **UniProt Entry Name** | VAV_HUMAN |
| **NCBI Protein Information** | proto-oncogene vav; vav 1 oncogene |
| **NCBI Summary for VAV1** | This gene is a member of the VAV gene family. The VAV proteins are guanine nucleotide exchange factors (GEFs) for Rho family GTPases that activate pathways leading to actin cytoskeletal rearrangements and transcriptional alterations. The encoded protein is important in hematopoiesis, playing a role in T-cell and B-cell development and activation. The encoded protein has been identified as the specific binding partner of Nef proteins from HIV-1. Coexpression and binding of these partners initiates profound morphological changes, cytoskeletal rearrangements and the JNK/SAPK signaling cascade, leading to increased levels of viral transcription and replication. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, Apr 2012] |

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| **UniProt Comments for VAV1** | Function: Couples tyrosine kinase signals with the activation of the Rho/Rac GTPases, thus leading to cell differentiation and/or proliferation.<br><br>Subunit structure: May interact with CCPG1<br><br>By similarity. Interacts with APS, DOCK2, GRB2, GRB3, DOCK2, SLA, TEC and ZNF655/VIK. Interacts with SIAH2; without leading to its degradation. Associates with BLNK, PLCG1, GRB2 and NCK1 in a B-cell antigen receptor-dependent fashion. Interacts with CBLB; which inhibits tyrosine phosphorylation and down-regulates activity. Interacts with SHB and CLNK<br><br>By similarity. Interacts with THEMIS2. Interacts with HCK<br><br>By similarity. Interacts with NEK3 and this interaction is prolactin-dependent. Interacts with ITK. Interacts with PTK2B/PYK2. Interacts (via SH2 domain) with SYK. Interacts with ANKRD54<br><br>By similarity. Ref.8 Ref.9 Ref.10 Ref.11 Ref.13 Ref.14 Ref.15 Ref.16 Ref.17 Ref.19 Ref.20<br><br>Tissue specificity: Widely expressed in hematopoietic cells but not in other cell types.<br><br>Domain: The DH domain is involved in interaction with CCPG1<br><br>By similarity.<br><br>Post-translational modification: Phosphorylated on tyrosine residues by HCK in response to IFNG and bacterial lipopolysaccharide (LPS)<br><br>By similarity. Phosphorylated by FYN. Ref.12<br><br>Miscellaneous: 'Vav' stands for the sixth letter of the Hebrew alphabet.<br><br>Sequence similarities: Contains 1 CH (calponin-homology) domain.Contains 1 DH (DBL-homology) domain.Contains 1 PH domain.Contains 1 phorbol-ester/DAG-type zinc finger.Contains 1 SH2 domain.Contains 2 SH3 domains.<br><br>Sequence caution: The sequence CAA34383.1 differs from that shown. Reason: Frameshift at positions 322 and 355. |
| **Research Articles on VAV1** | **1.** study provides evidence the large GTPase Dyn2 regulates the small GTPase Rac1 to potentiate invasive migration of pancreatic tumor cells; Dyn2 plays an essential role in regulating Rac1-mediated pancreatic tumor cell migration through modulation of the Rac1 activator Vav1 via a direct interaction |
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