

**DESCRIPTION**

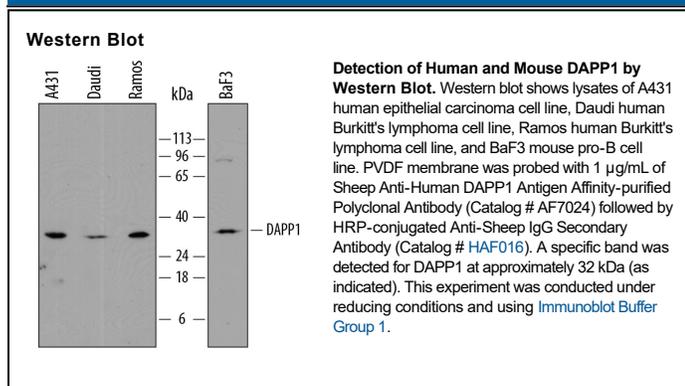
|                           |   |
|---------------------------|---|
| <b>Species Reactivity</b> | Human/Mouse   |
| <b>Specificity</b>        | Detects human and mouse DAPP1 in Western blots.   |
| <b>Source</b>             | Polyclonal Sheep IgG  |
| <b>Purification</b>       | Antigen Affinity-purified   |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human DAPP1<br>Gly2-Ser163<br>Accession # Q9UN19  |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

|                     | <b>Recommended Concentration</b> | <b>Sample</b> |
|---------------------|----------------------------------|---------------|
| <b>Western Blot</b> | 1 µg/mL                          | See Below     |

**DATA**



**PREPARATION AND STORAGE**

|                                |  |
|--------------------------------|--|
| <b>Reconstitution</b>          | Sterile PBS to a final concentration of 0.2 mg/mL.   |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C   |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

**BACKGROUND**

DAPP1 (Dual Adaptor for Phosphotyrosine and 3-Phosphoinositides 1; also Bam32 and PHISH) is a 31-32 kDa member of Ig-superfamily of proteins. It shows restricted expression, being found in mast cells, dendritic cells, and germinal center B cells. With respect to B cells, and upon B cell receptor engagement, PI3-kinase is activated, resulting in the generation of membrane-embedded PI(3,4)P2. This product serves as a ligand for cytosolic DAPP1, resulting in its immobilization at the cell membrane. Here, it is phosphorylated on Tyr139, directly regulating HPK1 (hematopoietic progenitor kinase 1) activity, and indirectly regulation HPK1 downstream targets ERK and JNK. Functionally, DAPP1 plays a role in BCR internalization, antibody isotype switching, antigen processing and presentation, and B cell survival. Human DAPP1 is 280 amino acids (aa) in length. It contains one SH2 domain (aa 35-129), a utilized phosphorylation site at Tyr139 and a C-terminal PH domain (aa 164-259). When phosphorylated, the observed MW of DAPP1 may be increased by 2-4 kDa in SDS-PAGE. There are four potential alternative splice variants. Two contain a five and 22 aa substitution for aa 259-280, respectively, while a third possesses a 14 aa substitution for aa 1-229, and a fourth shows deletions of aa 35-75 and aa 180-200 coupled to a three aa substitution for aa 249-280. Over aa 1-163, human DAPP1 shares 91% aa sequence identity with mouse DAPP1.