

#### 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>Conjugate</b>          | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

#### 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.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### 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.

#### PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.