

# Human SH2D1A Protein (His Tag)

Catalog Number: 11149-H07E



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

DSHP; EBVS; IMD5; LYP; MTCP1; SAP; SAP/SH2D1A; XLP; XLPD; XLPD1

### Protein Construction:

A DNA sequence encoding the human SH2D1A isoform 1 (NP\_002342.1) (Pro 2-Lys 97) was expressed, with a polyhistidine tag at the N-terminus.

**Source:** Human

**Expression Host:** E. coli

## QC Testing

**Purity:** > 94 % as determined by SDS-PAGE

### Bio Activity:

1. Measured by its ability to bind recombinant human SLAMF1 in a functional ELISA. 2. Measured by its ability to bind recombinant human SLAMF6 in a functional ELISA. 3. Measured by its ability to bind recombinant mouse SLAMF6 in a functional ELISA. 4. Measured by its ability to bind recombinant mouse CD84 in a functional ELISA.

### Endotoxin:

Please contact us for more information.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Met

### Molecular Mass:

The recombinant human SH2D1A consisting of 139 amino acids and has a calculated molecular mass of 15.6 kDa. It migrates as an approximately 14 kDa band in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.5, 20% glycerol

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

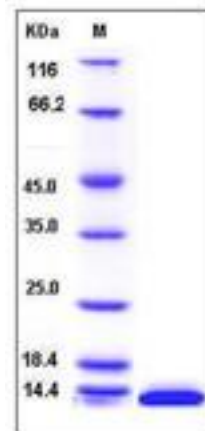
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

SH2 domain-containing protein 1A (SH2D1A / SAP) is a 128 amino acid protein, containing a single Src homology 2 (SH2) domain, flanked by 5 amino acids at the N-terminus and 25 amino acids at the C-terminus. The absence of a catalytic domain and the presence of an SH2 domain suggest that SH2D1A regulates one or more signal transduction pathways. SH2D1A interacts with signaling lymphocytic activation molecule (SLAM), which is a transmembrane protein expressed on the surface of activated T and B cells. SH2D1A (SAP) interacts via its SH2 domain with a motif (TIYXXV) present in the cytoplasmic tail of the cell-surface receptors, including CD150 / SLAM, CD84, CD229 / Ly-9, and CD244 / 2B4. SH2D1A was expressed in EBV-carrying, tumor phenotype representative (type I), but not in EBV-carrying lymphoblastoid cell line (LCL)-like (type III) or EBV-negative Burkitt lymphoma (BL) lines. It has been supposed to be related to the X-linked lymphoproliferative disease which is also known as Duncan's disease or Purtilo syndrome.

## References

1. Morra M, *et al.* (2005) Defective B cell responses in the absence of SH2D1A. PNAS. 102 (13): 4819-23. 2. Morra M, *et al.* (2001) Characterization of SH2D1A Missense Mutations Identified in X-linked Lymphoproliferative Disease Patients. The Journal of Biological Chemistry. 276: 36809-16. 3. Hron JD, *et al.* (2004) SH2D1A Regulates T-dependent Humoral Autoimmunity. JEM. 200 (2): 261-6.

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