

# Recombinant Mouse SH21B Protein

**For Research Use Only**

## 1. Basic Product Information

Catalog No.: REP51150

Size: 10ug, 100ug

Protein Name: SH2 domain-containing protein 1B (EWS/FLI1-activated transcript 2) (EAT-2)

Synonym: Sh2d1b, Eat2, Eat2a, Sh2d1b1

UniProt ID: O35324

UniProt Link: [www.uniprot.org/uniprotkb/O35324/entry](http://www.uniprot.org/uniprotkb/O35324/entry)

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 132 AA

Molecular Weight: 15 KD

Protein Tag: C-terminal His6

## 2. Amino Acid Sequence

MDLPYYHGCLTKRECEALLKGGVDGNFLIRDSESVPGALCLCVSFKKLVYSYRIFREKHGYYRIETD  
AHTPRITFPNLQELVSKYGKPGQGLVHLSNPIMRNNLCQRGRMELELNVEYNTDEEYVDVLP

## 3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

## 4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

## 5. Product Description

This product is recombinant SH2 domain-containing protein 1B (EWS/FLI1-activated transcript 2) (EAT-2) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

**Protein Function:** Cytoplasmic adapter regulating receptors of the signaling lymphocytic activation molecule (SLAM) family such as CD84, SLAMF1, LY9 and CD244. In SLAM signaling seems to cooperate with SH2D1A/SAP. Plays a role in regulation of effector functions of natural killer (NK) cells by controlling signal transduction through CD244/2B4. However, conflicting results are reported which may reflect the use of different strain backgrounds. Proposed to act as an inhibitor of CD244-mediated NK cell function including cytotoxicity and IFN-gamma production, the latter found also by triggering KLRA4 and KLRK1 next to CD244 (PubMed:16127454). Seems to positively regulate CD244- and CD84-dependent NK cell functions implicating CD244-mediated phosphorylation of VAV1. Activation of SLAMF7-mediated NK cell function does not effect receptor tyrosine phosphorylation but distal signaling (PubMed:19151721, PubMed:20962259, PubMed:24687958). In the context of NK cell-mediated cytotoxicity does not enhance conjugate formation with target cells but stimulates polarization of the microtubule-organizing center and cytotoxic granules toward the NK cell synapse (PubMed:24687958). Negatively regulates CD40-induced cytokine production in dendritic cells downstream of SLAM family receptors probably by inducing activation of the PI3K pathway to inhibit p38 MAPK and JNK activation (PubMed:26432891).

Subcellular Localization: N/A

## 6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.