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## Technical Data Sheet

**For research use only**  
Not intended or approved for  
diagnostic or therapeutic use.

# SHIP2 Lipid Phosphatase, active

**Product Number:** E-1000

**Description:** N-terminal His-tagged, recombinant human SHIP2 (truncated form containing SH2 domain and inositol 5-phosphatase catalytic domain), 103 kDa, purified from *E.coli* using Ni-NTA column chromatography. SHIP2 selectively removes phosphate from the 5' position of the inositol ring of PtdIns(3,4,5)P<sub>3</sub>.

**Storage:** Store enzyme at -70 °C or lower for up to 6 months after receipt. Aliquot to avoid multiple freeze/thaw cycles. Optional: Store SHIP2 enzyme at -20 °C for at least 2 months.

**Formulation:** 0.5 mg/mL SHIP2 in 20 mM Tris (pH 8.0), 300 mM NaCl, 1 mM β-ME, and 50% (v/v) Glycerol.

**Assay Conditions:** Reaction can be run at 37 °C for 30-60 minutes in SHIP2 reaction buffer (catalog # K-S2RB) with 1-5 μg/mL SHIP2 and 2 μM PI(3,4,5)P<sub>3</sub> substrate (catalog # P-3908). Detect PI(3,4)P<sub>2</sub> product using SHIP2 FP Assay (catalog # K-1400). Optional: Increase PI(3,4,5)P<sub>3</sub> substrate to 120 μM and detect free phosphate product using Malachite Green Assay (catalog # K-1500).

### Related Products:

1. SHIP2 Reaction Buffer: K-S2RB
2. Unlabeled Substrate: P-3908, P-3904, P-3916
3. Labeled Substrate:
  - C-39B6 and C-39B6a - Biotin-PtdIns(3,4,5)P<sub>3</sub>
  - C-39M6 and C-39M6a - BODIPY TMR-PtdIns(3,4,5)P<sub>3</sub>
  - C-39F6 and C-39F6a - BODIPY FL-PtdIns(3,4,5)P<sub>3</sub>
4. SHIP2 Fluorescence Polarization Kit: K-1400
5. Malachite Green Phosphatase Assay Kit: K-1500

### References:

1. Competitive fluorescence polarization assays for the detection of phosphoinositide kinase and phosphatase activity. Drees BE, *et al.* Comb Chem High Throughput Screen. 2003 Jun; 6(4):321-30.
2. Inositol polyphosphate multikinase is a nuclear PI3-kinase with transcriptional regulatory activity. Adam C. Resnick, *et al.* Proc Natl Acad Sci U S A. 2005 September 6; 102(36): 12783-12788.