

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse and rat SHIP2 in Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human SHIP2 Ala1106-Lys1258 Accession # O15357
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

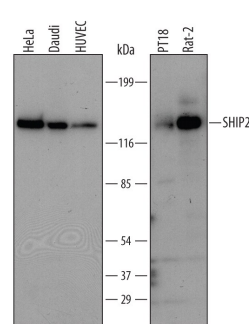
APPLICATIONS

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.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below
Immunohistochemistry	3-15 µg/mL	See Below

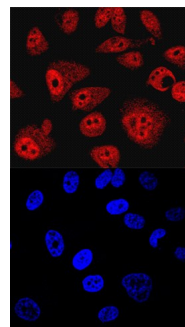
DATA

Western Blot



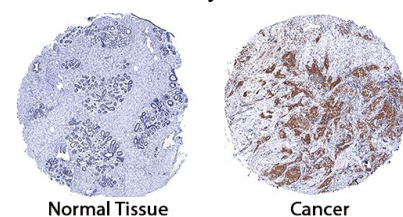
Detection of Human/Mouse/Rat SHIP2 by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, Daudi human Burkitt's lymphoma cell line, HUVEC human umbilical vein endothelial cells, PT18 mouse mast/basophil cell line, and Rat-2 rat embryonic fibroblast cell line. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human/Mouse/Rat SHIP2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5389) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for SHIP2 at approximately 140 kDa (as indicated). This experiment was conducted using [Immunoblot Buffer Group 1](#).

Immunocytochemistry



SHIP2 in PC-3 Human Cell Line. SHIP2 was detected in immersion fixed PC-3 human prostate cancer cell line using Sheep Anti-Human/Mouse/Rat SHIP2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5389) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red, upper panel; Catalog # NL010) and counterstained with DAPI (blue, lower panel). Specific staining was localized to nuclei and cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#). This application has not yet been tested in mouse or rat samples.

Immunohistochemistry



SHIP2 in Human Breast Cancer Tissue. SHIP2 was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using Sheep Anti-Human/Mouse/Rat SHIP2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5389) at 3 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Goat IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC004). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in cancer cells. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

PREPARATION AND STORAGE

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

BACKGROUND

SHIP2 (SH2 domain-containing inositol 5-phosphatase 2; also inositol polyphosphate phosphatase-like 1) is a member of the phosphatidylinositol/PtdIns 5-phosphatase family of enzymes. It is widely expressed and negatively regulates PI3 kinase pathways by hydrolyzing the 5-phosphate of PtdIns-3,4,5-triphosphate. Human SHIP2 is 1258 amino acids (aa) in length. It contains one SH2 domain (aa 21-117), a Pro-rich region with an SH3 binding site (aa 935-1105), and a SAM (or sterile α -motif) domain that binds ARAP3 (aa 1196-1258). SHIP2 is phosphorylated in response to growth factor activation on Tyr986, 1162 and 1358, and on Thr958, among other sites. Over aa 1106-1258, human SHIP2 shares 95% aa identity with mouse SHIP2.