



# Protein Phosphatase LMW-PTP/ACP1 Fluorometric (Human) Assay Kit

## Product Information

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### Cat.No.

Kit-0737

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### Product Overview

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Protein Phosphatase LMW-PTP/ACP1 Fluorometric (Human) Assay Kit is a fluorometric and non-radioactive assay designed to measure the activity of LMW-PTP/ACP1 protein phosphatase.

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### Description

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Protein tyrosine phosphorylation plays an essential role in the regulation of many cellular processes, including cellular proliferation, differentiation, migration and tumorigenic transformation. The phosphorylation of proteins on tyrosine is catalyzed by numerous protein tyrosine kinases, and is rapidly and reversibly dephosphorylated by Protein tyrosine phosphatases (PTPases). The low molecular weight protein tyrosine phosphatase (LMW-PTP) is an 18-kDa cytosolic enzyme, also known as acidic protein phosphatase 1 (ACP1). LMW-PTP/ACP1 is specific for phosphotyrosine in peptides and proteins, but the enzyme shares very limited sequence homology with other PTPases. Although LMW-PTP/ACP1 has been shown as a negative regulator of insulin- and platelet-derived growth factor (PDGF)-mediated mitotic and metabolic signaling, LMW-PTP/ACP1 is frequently overexpressed in transformed cells. Recent studies suggested that ectopic overexpression of LMW-PTP/ACP1 is sufficient to confer transformation in epithelial cells and its oncogenic activities require EphA2. LMW-PTP/ACP1 negatively regulates EphA2 receptor tyrosine kinase. LMW-PTP/ACP1 is a positive regulator of both tumor onset and development through ephrin-EphA2 signaling process, and it is a potential target of anticancer drug development.

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### Applications

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The Protein Phosphatase LMW-PTP/ACP1 Fluorometric Assay Kit is a fluorometric and non-radioactive assay designed to measure the activity of LMW-PTP/ACP1 protein phosphatase. This 96-well assay is useful for screening inhibitors and modulators of LMW-PTP/ACP1 activity in HTS. The kit includes all necessary components, including recombinant, human full length LMW-PTP/ACP1, for use in preinvestigational drug discovery assays.

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## Protein Phosphatase LMW-PTP/ACP1 Fluorometric (Human) Assay Kit

### Target Species

Human

### Usage

For research use only (RUO)

### Storage

□ Upon receipt, store the kit at  $-70^{\circ}\text{C}$  □ Do not expose reagents to excessive light. □ AVOID REPEATED FREEZE THAW CYCLES OF "Recombinant LMW-PTP/ACP1"!

### Kit Components

10X Assay Buffer 600  $\mu\text{L}$  x 1 Less than  $-20^{\circ}\text{C}$  10X OMFP 550  $\mu\text{L}$  x 1 Less than  $-20^{\circ}\text{C}$  Recombinant LMW-PTP/ACP1 (20 m units/ $\mu\text{L}$ )\* 500  $\mu\text{L}$  x 1  $-70^{\circ}\text{C}$  100X Phosphatase Inhibitor : 100 mM  $\text{Na}_3\text{VO}_4$  in DW 100  $\mu\text{L}$  x 1 Less than  $-20^{\circ}\text{C}$  Stop Solution 1,300  $\mu\text{L}$  x 2 Less than  $-20^{\circ}\text{C}$  Instruction Manual 1 Room temp. \*"Recombinant LMW-PTP/ACP1" is human full length with N-terminal GST-Tag. The GenBank Accession No. is BC~10^6011.