

## Description of Additional Supplementary Files

**File name:** Supplementary Data 1

**Description:** The results of mass spectrometry analysis between the cells transfected with Vector or Flag-PSAT1.

**File name:** Supplementary Data 2

**Description:** The untargeted metabolomics analysis between the cells transfected with Vector, His-USP14 or His-HDAC7

**File name:** Supplementary Data 3

**Description:** Source data for graphs