

Table S1. Identification of 10 *in vitro* phosphorylation sites of RUPO.

| Peptide sequence ^a | Position | Prec MW ^b | ΔMass ^c | Confidence ^d | Score ^e |
|-------------------------------|----------|----------------------|--------------------|-------------------------|--------------------|
| SGYTFSS[Pho]STLGLGR | 494 S | 1424.6334 | -0.0003 | 99 | 81 |
| SGYTFSS[Pho]TLGLGR | 495 S | 1424.6387 | 0.0049 | 99 | 67 |
| IQAAT[Pho]KNFE | 512 T | 1100.4880 | -0.0022 | 99 | 33 |
| IDDGT[Pho]KVAVKRGNPQSE | 538 T | 1892.9008 | 0.0016 | 99 | 71 |
| DGPGMNQLHVS[Pho]TAVK | 673 S | 1632.7361 | 0.0029 | 99 | 76 |
| DGPGMNQLHVST[Pho]AVK | 674 T | 1632.7354 | 0.0022 | 99 | 73 |
| TLC[CAM]ARPPIDPQLPREQVS | 726 S | 2469.2075 | -0.0009 | 99 | 80 |
| [Pho]LAE | | | | | |
| LAGT[Pho]VNQESLNK | 751 T | 1352.6362 | 0.0025 | 99 | 88 |
| LAGTVNQES[Pho]LNK | 756 S | 1352.6331 | -0.0007 | 99 | 85 |
| C[CAM]LAEGFS[Pho]DR | 773 S | 1133.4200 | -0.0013 | 99 | 43 |

^aThe amino acid sequence of phosphorylated peptides, where Ser/Thr phosphorylation and carbamidomethyl modification are denoted by [Pho],[CAM] respectively.

^bThe experimentally measured monoisotopic mass for the precursor ion fragmented.

^cThe difference in mass between the precursor MW and the theoretical MW of the matching peptide sequence.

^dPeptide confidence given by ProteinPilot 4.5.

^eMascot score. Individual ion score >34 (for trypsin) or score >29 (for Glu-C) means the probability of random match is less than 0.05. In total, the MS/MS data covered >

96.95% amino acid sequence of the intracellular domain, including all Ser/Thr/Tyr residues except for Tyr- 588.