

## **Descriptions of Additional Supplementary Files**

### **Supplementary dataset 1**

**Description:** Phosphorylation results of LB cultured E.coli. 27 N-pho sites, containing 15 pHis, 8 pLys and 4 pArg, were identified.

### **Supplementary dataset 2**

**Description:** Phosphorylation results of different carbon source cultured E.coli. 99 N-pho sites, containing 19 pHis, 38 pLys and 42 pArg, were identified.

### **Supplementary dataset 3**

**Description:** Phosphorylation results of HeLa. 3384 N-pho sites, containing 611 pHis, 1618 pLys and 1155 pArg, were identified]. T