



## Supplementary File S1 RAM-PGK: Prediction of Lysine Phosphoglycerylation based on Residue Adjacency Matrix

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- **Supplement Material.** Comparison of the time needed to carry out feature construction and 6-fold cross-validation of each of the methods on Matlab program. The comparison was carried out on a machine with 24 CPUs (Intel(R) Xeon(R) CPU E5 2650 v4 @ 2.20GHz) and 125.8 GB memory. PSI-BLAST tool was run using 16 CPUs while the other programs was run on single CPU.

| Method            | Feature Construction time     | 6-Fold Cross-Validation time | Total Time |
|-------------------|-------------------------------|------------------------------|------------|
|                   |                               |                              | (seconds)  |
| CKSAAP_PhoglySite | 402.53 sec                    | 83.82 sec                    | 486.35     |
| iPGK-PseAAC       | 6.91 sec                      | 8.69 sec                     | 15.60      |
| Bigram-PGK        | PSI-BLAST + Matlab Program    | 2.12 sec                     | 5096.22    |
|                   | 5078.39 + 15.71 = 5094.10 sec |                              |            |
| RAM-PGK           | 48.52 sec                     | 0.49 sec                     | 49.01      |