### Hardware information

\* AMD Opteron(tm) Processor 6204

\* 32G

### Data set

\* st\_no\_digetion.msalign

\* st.fasta

### Test on July 9, 2014, Time consumed

| Process | Time consumed (seconds) |

|:-------------:| :-----:|

|Zero ptm searching | 2600.42 |

|Fast filtering | 7407.23 |

|Ptm searching| 8112.25|

|Combining prsms | 97.88 |

|Poisson computation | 230.26 |

|E-value computation | 30359.2 |

|Top prsm selecting | 123.73 |

|FDR computation| 5.93|

|Prsm cutoff selecting| 5.43|

| Finding species | 5.07 |

| Results Output | 139.59 |

| All | 49087.3 |

### E-value computation time consumed detail

| Min | Mean | Max |

|:-------------:| :-----:|:------:|

|0.00 | 8.63 |109.70|

### Test on August 19, 2014

| Process | Time consumed (seconds) |

|:-------------:| :-----:|

|Zero ptm searching | 2373.52 |

|Fast filtering | 5143.18 |

|Ptm searching| 21740.14 |

|Ptm searching with 0.01 refine step width| 15991.84 |

### Test on August 24, 2014

| Process | Time consumed (seconds) |

|:-------------:| :-----:|

|Ptm searching| 6712.55|

### Test on Nov 8, 2014 (CPU: i7, Thread number: 4)

| |4 threads | 1 thread |

|:---:|:---:|:---:|

|Zero ptm filter | 205 | 572 |

|Diag filter |504 | 829 |

|PTM search |1918 | 4812 |

### Test on Dec 8, 2014 (CPU: i7)

| Process | Time consumed (seconds) |

|:-------------:| :-----:|

|Zero ptm searching | 1160.92 |

|Diag filtering | 1616.87 |

|One ptm filtering | 47.6636 |

|Ptm searching| 5379 |

|e-value| 24137.2 |

|output table, html|76.8187|

### Test on August 4, 2015 (CPU: Xiaowen)

| Process | Time consumed (seconds) |

|:-------------:| :-----:|

|Zero ptm searching | 613 |

|One ptm filtering | 37 |

|Diag filtering | 830 |

|Ptm searching| 4727 |

|e-value| 47 |

|output table, html |195|

|Total | 6449 |

### Test on August 6, 2015 (CPU Intel Core i7-3770)

Change filtering number to 5. Reading and Writing speed much less time than alignment.

| Process | Time consumed (seconds) |

|:-------------:| :-----:|

|Ptm searching| 846 |

Change filtering number to 3.

| Process | Time consumed (seconds) |

|:-------------:| :-----:|

|Ptm searching| 405 |

Zero Ptm search (complete prefix suffix)

| Process | Time consumed (seconds) |

|:-------------:| :-----:|

|Zero ptm search (complete prefix suffix)| 296 |

### Test on Dec 30, 2015 (CPU Intel Core i7-3770 + 16GB memory)

``./test\_base\_opt -d -t FDR -f C57 Salmonella\_typhimurium\_LT2.fasta ST.msalign``

| Process | Time consumed (seconds) |

|:-------------:| :-----:|

|Zero PTM filtering| 64 |

|Zero PTM search|23|

|One PTM filtering| 60|

|One PTM search| 1132|

|Diagonal filtering | 1475|

|Two PTM search | 1559 |

|Combining prsms | 3 |

|Computing e-values | 35|

### Test on Jan 8, 2016 (CPU Intel Core i7-3770 + 16GB memory)

``./test\_base\_opt -d -t FDR -f C57 Salmonella\_typhimurium\_LT2.fasta ST.msalign``

| Process | Time consumed (seconds) |

|:-------------:| :-----:|

|Zero PTM filtering| 63 |

|Zero PTM search|22|

|One PTM filtering| 62|

|One PTM search| 143|

|Diagonal filtering | 1392|

|Combining prsms | 1 |

|Computing e-values | 17|

### Test on Jan 17, 2016 (CPU Intel Core i7-3770 + 16GB memory)

``./test\_base\_opt -d -t FDR -f C57 -g Salmonella\_typhimurium\_LT2.fasta ST.msalign``

| Process | Time consumed (seconds) |

|:-------------:| :-----:|

|Zero PTM filtering| 61 |

|Zero PTM search|21|

|One PTM filtering| 66|

|One PTM search| 130|

|Diagonal filtering | 1433|

|Two PTM search |1420|

|Combining prsms | 1 |

|Computing e-values | 20660|

## Test on April 6, 2016

Database: H4

MS/MS: 1626CID + 1626ETD

|Serial code | 4 threads | 6 threads

------|------ | ----------|---

No constraint|516 min | 207 min

Gap 20|109 min | 32 min (3.1 GB memory) | 27 min