New way to accomplish method 2 from my earlier document (fungal conservation)

Use a yeast protein sequence for identifying the corresponding protein in another organism (with BLAST search):

1. Do a BLAST with the yeast protein sequence against a specific genome (Schizosaccharomyces pombe, for example); the genomes to use are listed at the end of this document

* Go to blast.ncbi.nlm.nih.gov
* Choose “protein blast”
* Enter yeast protein sequence in search box
* For Database - choose nonredundant protein sequences
* For Organism – enter scientific name of organism (will autofill; choose the one that matches; should also have a taxid #; see list below)
* Run blast

1. Click on the top hit from the blast search & download the sequence as a FASTA sequence (will give you a .txt file)
2. Copy this sequence & then use for a new blast search – using same method in #1 above, except putting in “Saccharomyces cerevisiae” for the Organism (again, need the taxid #)
3. Compare the first hit from this new search (step #3) with the original sequence used for the 1st blast search (step #1). Maybe run a clustal alignment to compare & look for 100% match?
4. If there is a 100% match of the Saccharomyces cerevisiae hit from step #4 with the original sequence from step #1, then you are done; take the protein sequence downloaded in step #2 & use as the one for that organism for the final alignment
5. If the first result from step #2 doesn’t match 100% to original, then go back to the output from step #2 and repeat steps #3-5 with the 2nd hit
6. Continue to go back to the results from step #2, checking up to the first 5 results, using steps #3-5
7. If none of the first 5 results from step #2 match the original sequence from step #1, then discard that organism & don’t include in the alignment
8. Repeat all of these steps as needed to find a sequence for each organism listed below

Fungi

Saccharomyces cerevisiae (start sequence)

Schizosaccharomyces pombe

Scheffersomyces stipitis

Ogataea parapolymorpha

Komagataella phaffii

Cyberlindnera fabianii

Kluyveromyces lactis

Vanderwaltozyma polyspora

Zygosaccharomyces rouxii

Saccharomyces paradoxus

Candida glabrata

Lachancea fermentati

Ashbya gossypii

Torulaspora delbruecki

Naumovozyma castellii

Cyberlindnera jadinii

Pachysolen tannophilus

Candida auris