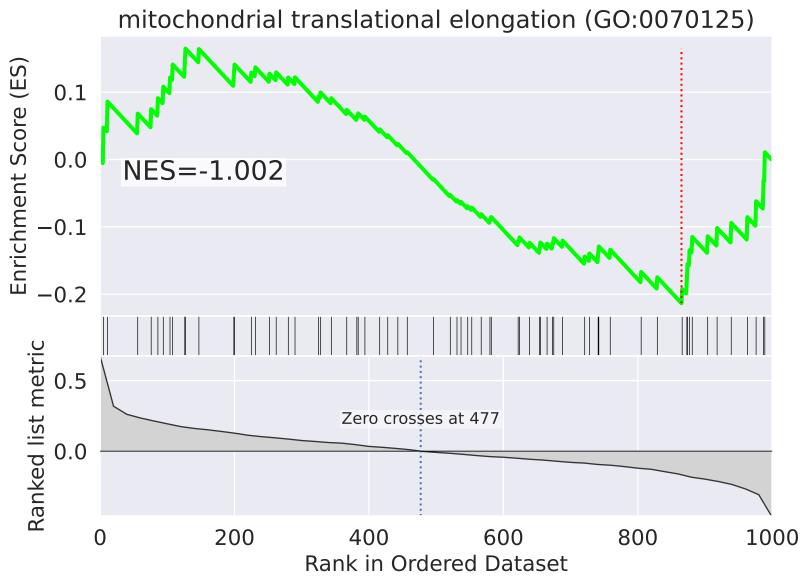
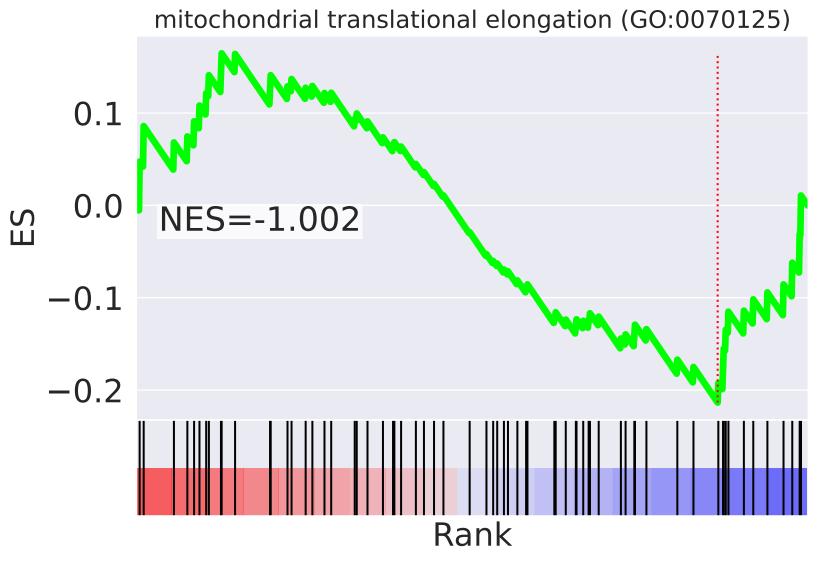
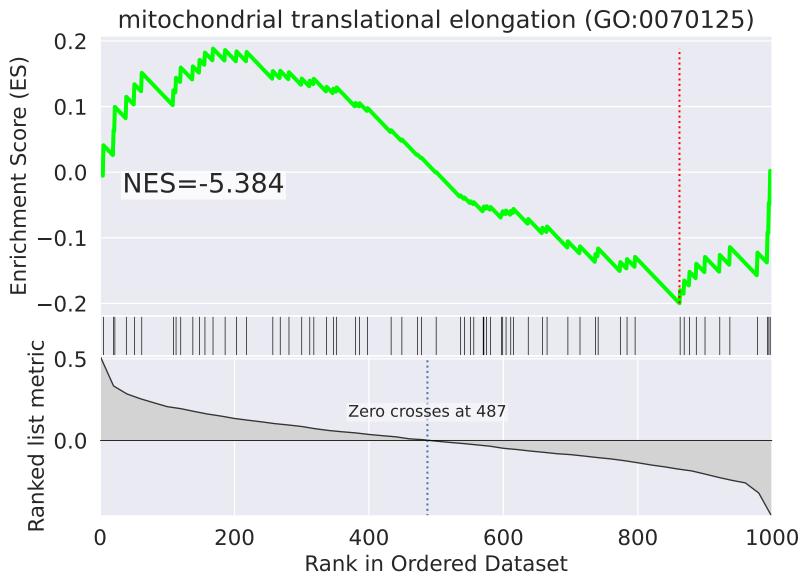


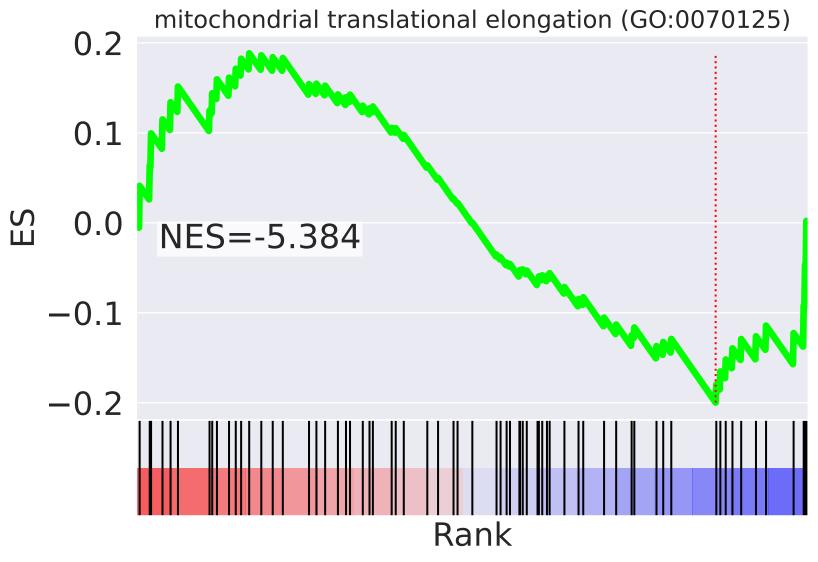
| NES    | SET   |
|--------|---|
| -5.237 | mitochondrial translational elongation (GO:0070125)   |
| -5.039 | mitochondrial translational termination (GO:0070126)  |
| -3.291 | translation (GO:0006412)  |
| -2.972 | mitochondrial translation (GO:0032543)  |
| 2.677  | protein ubiquitination involved in ubiquitin-dependent protein catabolic process (GO:0042787) |
| 2.676  | neutrophil degranulation (GO:0043312)   |
| 2.646  | purine ribonucleoside monophosphate biosynthetic process (GO:0009168)                         |
| -2.374 | protein homooligomerization (GO:0051260)  |
| -2.368 | negative regulation of transcription, DNA-templated (GO:0045892)                              |
| 2.263  | mitotic spindle organization (GO:0007052)   |
| -2.253 | tRNA aminoacylation for protein translation (GO:0006418)                                      |
| 2.227  | transcription-coupled nucleotide-excision repair (GO:0006283)                                 |
| 2.196  | mitochondrial electron transport, NADH to ubiquinone (GO:0006120)                             |
| -2.181 | mitochondrial electron transport, cytochrome c to oxygen (GO:0006123)                         |
| 2.128  | negative regulation of telomere maintenance via telomerase (GO:0032211)                       |



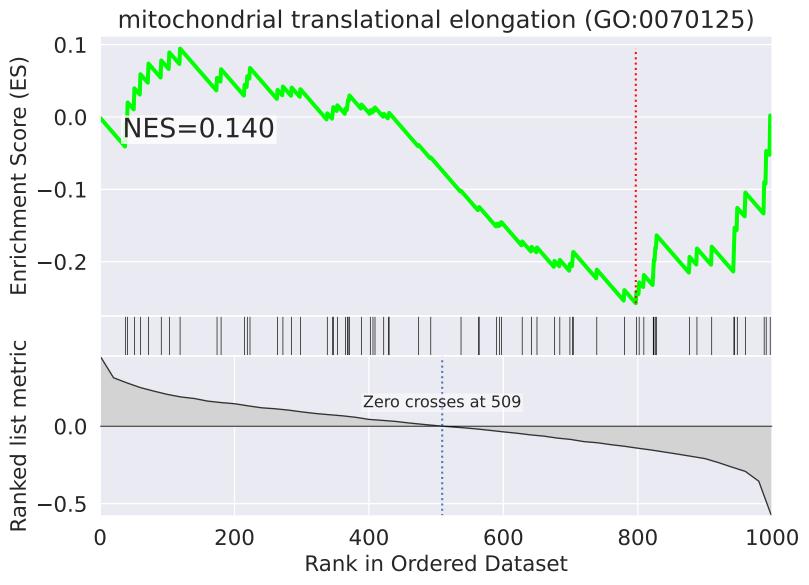


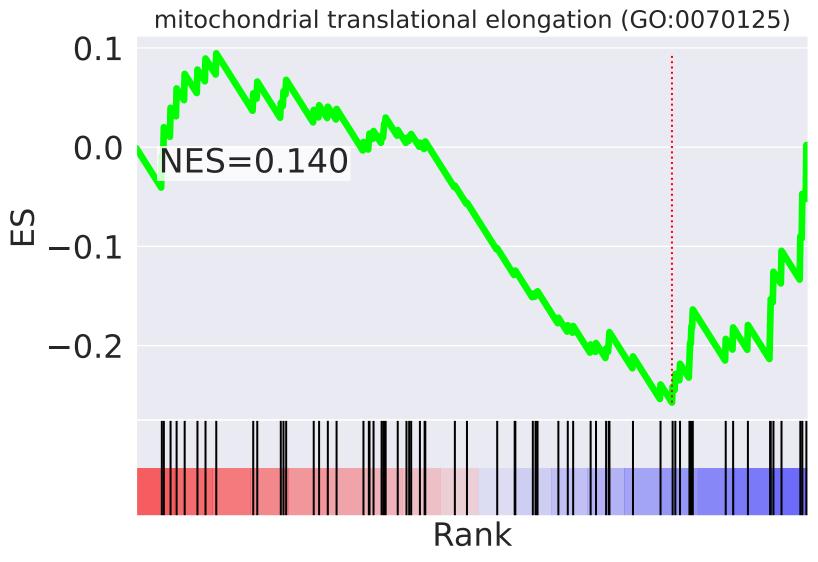
| NES    | SET   |
|--------|---|
| -3.279 | purine ribonucleoside monophosphate biosynthetic process (GO:0009168)                       |
| -2.843 | insulin receptor signaling pathway (GO:0008286)   |
| -2.767 | Ras protein signal transduction (GO:0007265)  |
| 2.710  | regulation of mRNA stability (GO:0043488)   |
| -2.486 | regulation of cholesterol biosynthetic process (GO:0045540)                                 |
| -2.464 | axon guidance (GO:0007411)  |
| -2.454 | ERBB2 signaling pathway (GO:0038128)  |
| -2.312 | cholesterol biosynthetic process (GO:0006695)   |
| -2.309 | epidermal growth factor receptor signaling pathway (GO:0007173)                             |
| -2.300 | leukocyte migration (GO:0050900)  |
| -2.293 | response to endoplasmic reticulum stress (GO:0034976)                                       |
| 2.213  | regulation of apoptotic process (GO:0042981)  |
| 2.188  | regulation of ubiquitin-protein ligase activity involved in mitotic cell cycle (GO:0051439) |
| -2.160 | positive regulation of mitotic cell cycle (GO:0045931)                                      |
| -2.135 | fibroblast growth factor receptor signaling pathway (GO:0008543)                            |



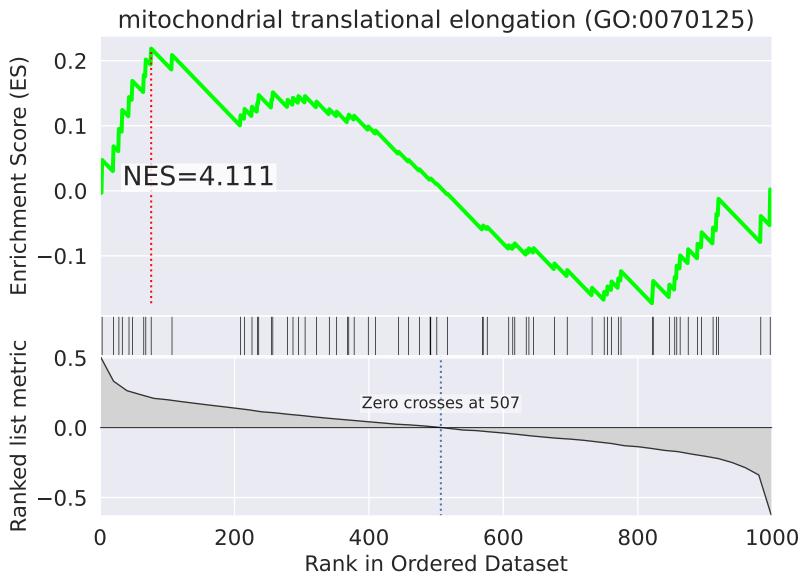


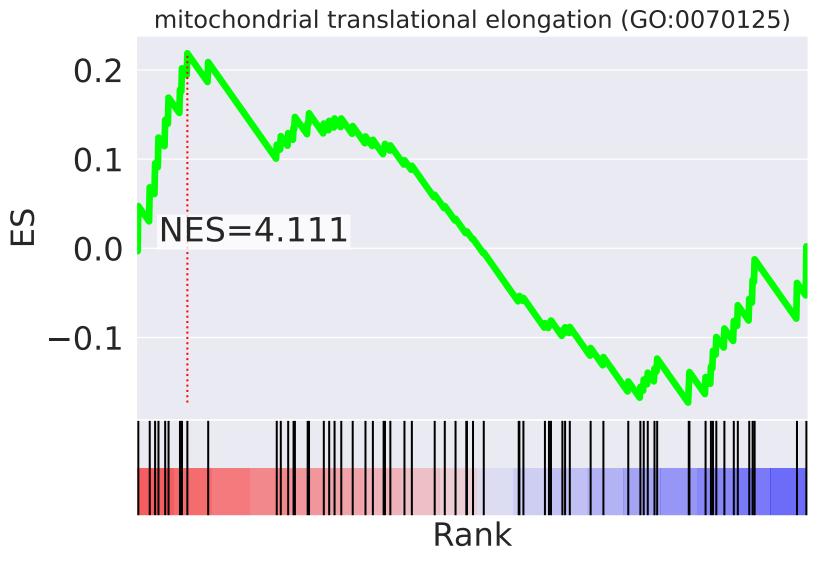
| NES    | SET   |
|--------|---|
| -5.384 | mitochondrial translational elongation (GO:0070125)                       |
| -5.241 | mitochondrial translational termination (GO:0070126)                      |
| -4.313 | mitochondrial respiratory chain complex I assembly (GO:0032981)           |
| -4.127 | mitochondrial electron transport, NADH to ubiquinone (GO:0006120)         |
| 3.475  | positive regulation of cell proliferation (GO:0008284)                    |
| -3.259 | mitochondrial translation (GO:0032543)                                    |
| 3.103  | negative regulation of apoptotic process (GO:0043066)                     |
| 3.033  | MAPK cascade (GO:0000165)   |
| 2.968  | positive regulation of cell growth (GO:0030307)                           |
| 2.896  | Fc-gamma receptor signaling pathway involved in phagocytosis (GO:0038096) |
| 2.860  | Ras protein signal transduction (GO:0007265)                              |
| 2.834  | retrograde vesicle-mediated transport, Golgi to ER (GO:0006890)           |
| 2.782  | positive regulation of protein phosphorylation (GO:0001934)               |
| -2.780 | translation (GO:0006412)  |
| 2.760  | endosomal transport (GO:0016197)  |



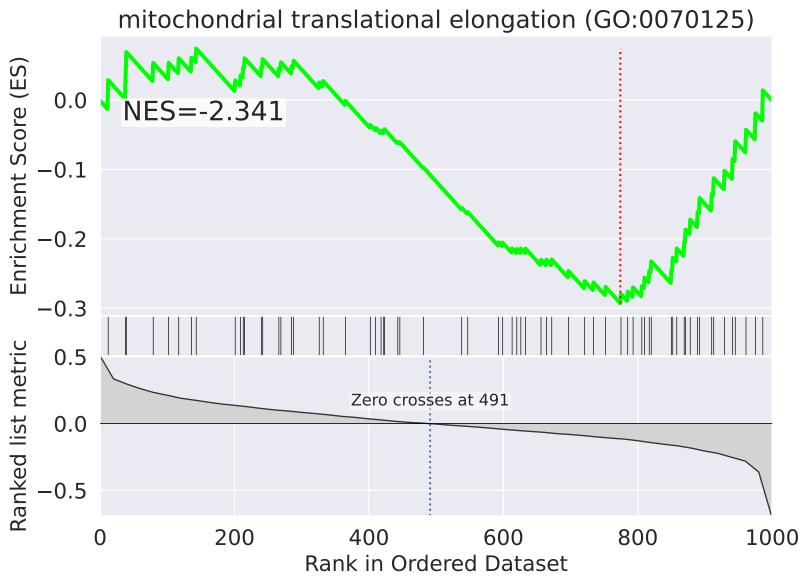


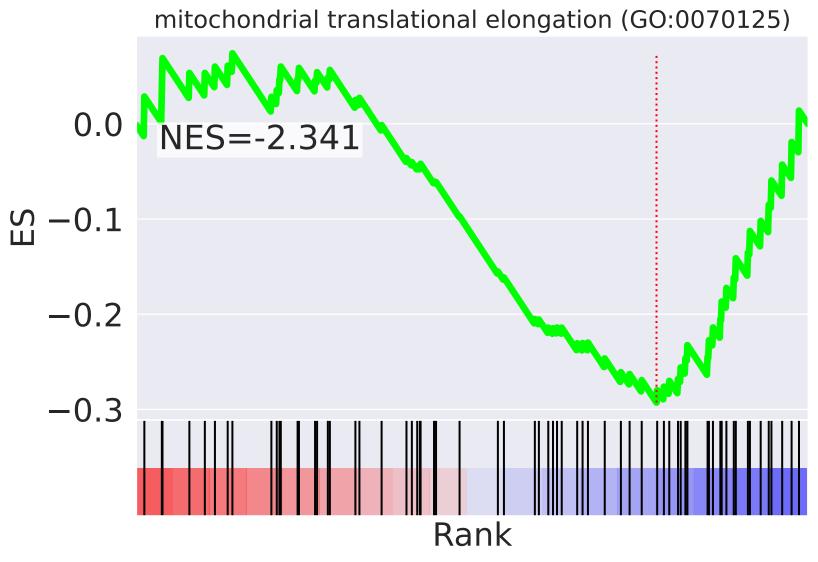
| NES    | SET   |
|--------|---|
| -3.332 | membrane organization (GO:0061024)  |
| 2.962  | protein ubiquitination involved in ubiquitin-dependent protein catabolic process (GO:0042787) |
| 2.839  | mitotic cell cycle (GO:0000278)   |
| 2.735  | mitotic cytokinesis (GO:0000281)  |
| 2.721  | mitotic metaphase plate congression (GO:0007080)  |
| -2.661 | purine ribonucleoside monophosphate biosynthetic process (GO:0009168)                         |
| 2.620  | anaphase-promoting complex-dependent catabolic process (GO:0031145)                           |
| -2.429 | regulation of cholesterol biosynthetic process (GO:0045540)                                   |
| -2.388 | protein autophosphorylation (GO:0046777)  |
| 2.366  | mRNA splicing, via spliceosome (GO:0000398)   |
| 2.303  | chromosome segregation (GO:0007059)   |
| 2.251  | DNA replication (GO:0006260)  |
| 2.238  | intrinsic apoptotic signaling pathway (GO:0097193)  |
| 2.209  | tRNA modification (GO:0006400)  |
| 2.196  | sister chromatid cohesion (GO:0007062)  |



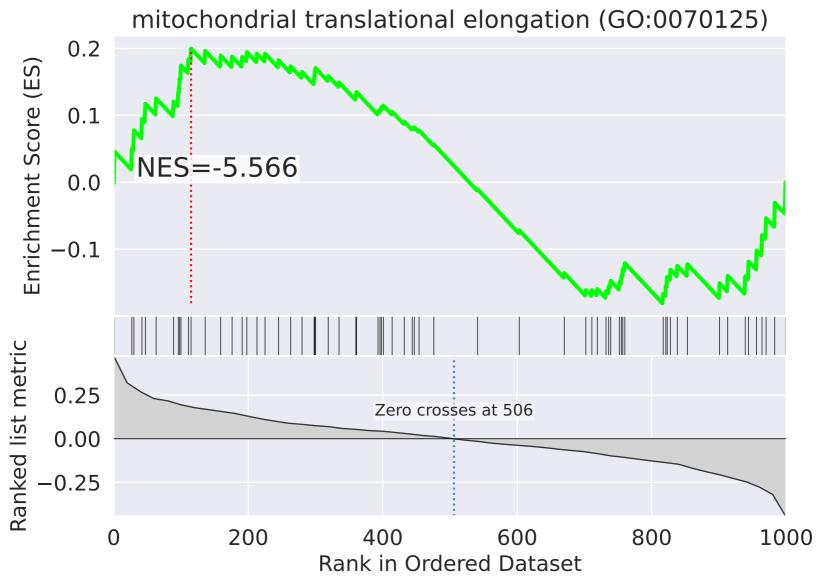


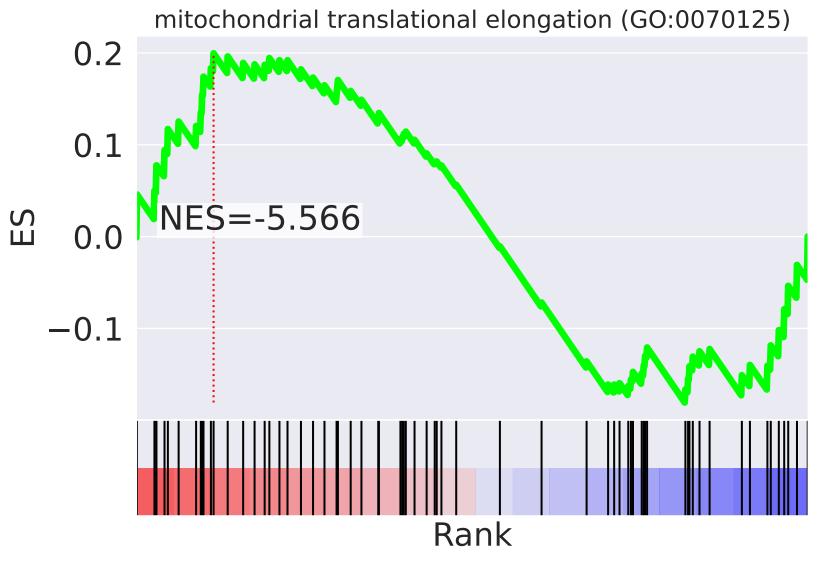
| NES    | SET  |
|--------|--|
| 4.189  | mitochondrial translational termination (GO:0070126)                       |
| 4.111  | mitochondrial translational elongation (GO:0070125)                        |
| -3.523 | positive regulation of cell proliferation (GO:0008284)                     |
| 3.130  | mitochondrial respiratory chain complex I assembly (GO:0032981)            |
| 3.068  | mitochondrial electron transport, NADH to ubiquinone (GO:0006120)          |
| 2.897  | protein deubiquitination (GO:0016579)                                      |
| -2.759 | protein autophosphorylation (GO:0046777)                                   |
| -2.749 | signal transduction (GO:0007165)   |
| -2.698 | positive regulation of cell migration (GO:0030335)                         |
| -2.617 | epidermal growth factor receptor signaling pathway (GO:0007173)            |
| -2.578 | nuclear-transcribed mRNA poly(A) tail shortening (GO:0000289)              |
| -2.557 | movement of cell or subcellular component (GO:0006928)                     |
| -2.556 | Fc-gamma receptor signaling pathway involved in phagocytosis (GO:0038096)  |
| -2.493 | protein K63-linked ubiquitination (GO:0070534)                             |
| -2.465 | vascular endothelial growth factor receptor signaling pathway (GO:0048010) |



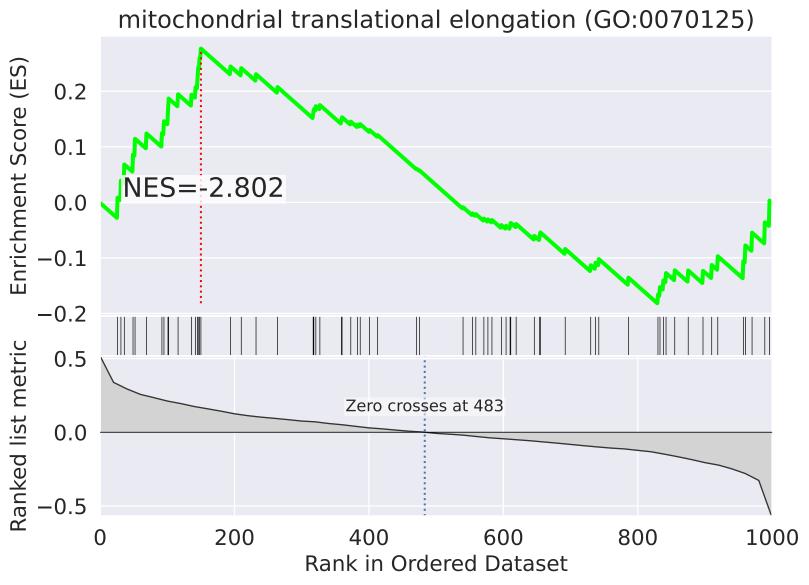


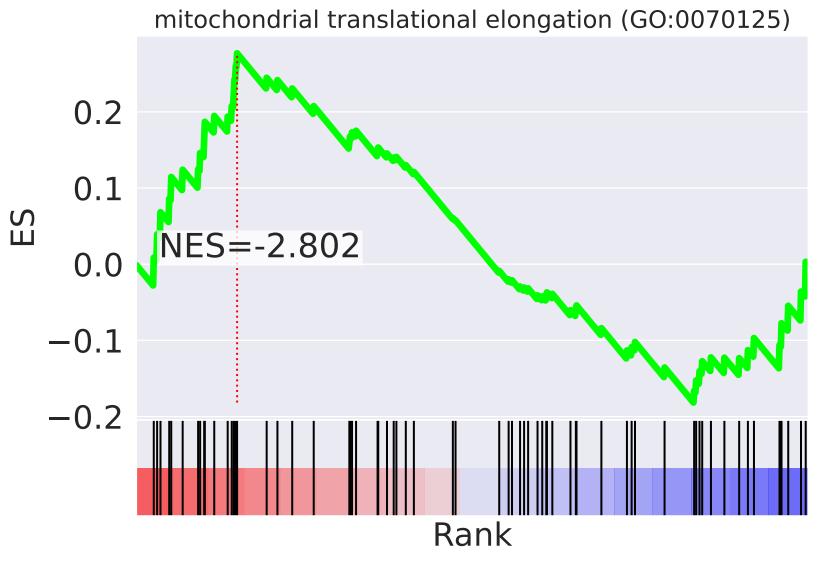
| NES    | SET   |
|--------|---|
| -3.442 | tricarboxylic acid cycle (GO:0006099)   |
| -3.180 | purine ribonucleoside monophosphate biosynthetic process (GO:0009168)                           |
| 2.613  | DNA repair (GO:0006281)   |
| 2.601  | integrin-mediated signaling pathway (GO:0007229)  |
| 2.466  | positive regulation of sequence-specific DNA binding transcription factor activity (GO:0051091) |
| -2.425 | cellular nitrogen compound metabolic process (GO:0034641)                                       |
| -2.346 | membrane organization (GO:0061024)  |
| -2.341 | mitochondrial translational elongation (GO:0070125)   |
| -2.310 | androgen receptor signaling pathway (GO:0030521)  |
| -2.284 | retrograde transport, endosome to Golgi (GO:0042147)  |
| -2.204 | tRNA aminoacylation for protein translation (GO:0006418)  |
| 2.185  | protein K63-linked ubiquitination (GO:0070534)  |
| 2.167  | vascular endothelial growth factor receptor signaling pathway (GO:0048010)                      |
| 2.152  | transforming growth factor beta receptor signaling pathway (GO:0007179)                         |
| 2.151  | protein autoubiquitination (GO:0051865)   |



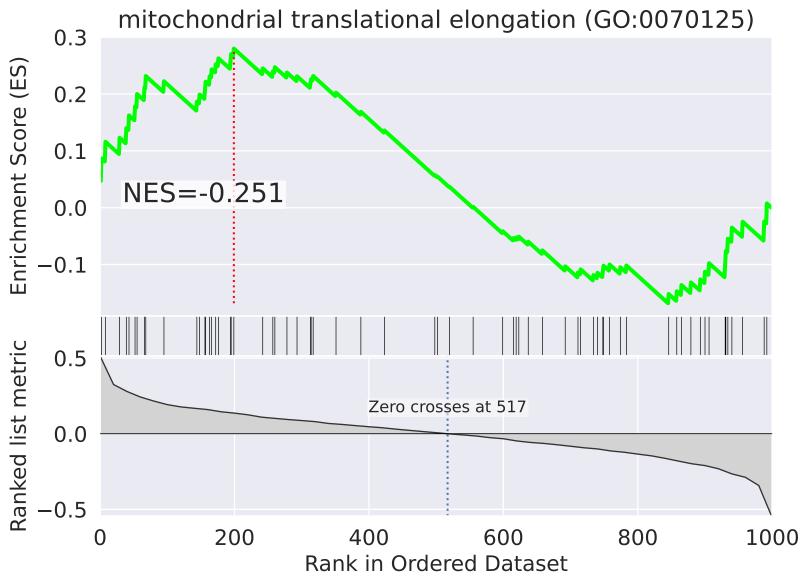


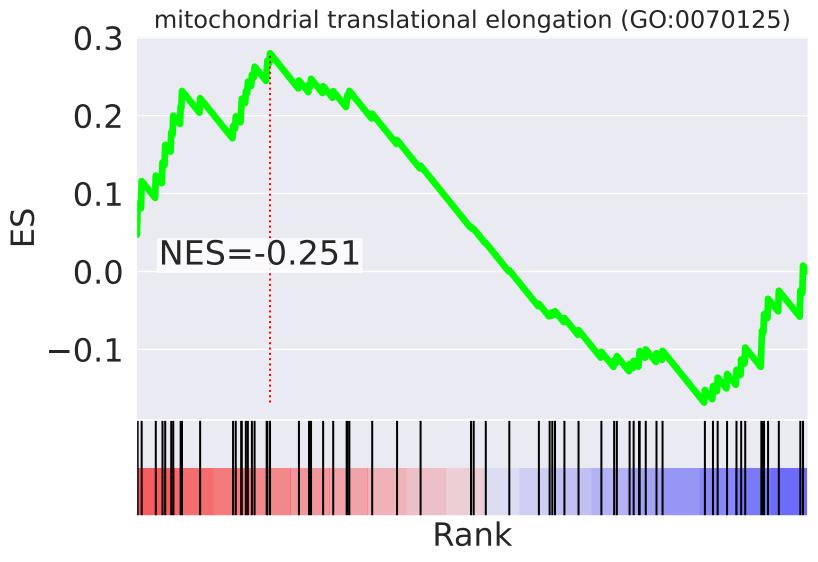
| NES    | SET   |
|--------|---|
| -5.744 | mitochondrial translational termination (GO:0070126)                      |
| -5.566 | mitochondrial translational elongation (GO:0070125)                       |
| -4.183 | mitochondrial respiratory chain complex I assembly (GO:0032981)           |
| -3.861 | mitochondrial electron transport, NADH to ubiquinone (GO:0006120)         |
| 2.765  | sister chromatid cohesion (GO:0007062)                                    |
| 2.562  | purine ribonucleoside monophosphate biosynthetic process (GO:0009168)     |
| 2.486  | Fc-gamma receptor signaling pathway involved in phagocytosis (GO:0038096) |
| -2.421 | nucleosome disassembly (GO:0006337)                                       |
| -2.420 | regulation of macroautophagy (GO:0016241)                                 |
| 2.382  | regulation of cellular response to heat (GO:1900034)                      |
| -2.353 | translation (GO:0006412)  |
| 2.327  | axon guidance (GO:0007411)  |
| 2.325  | cytokinesis (GO:0000910)  |
| 2.252  | epidermal growth factor receptor signaling pathway (GO:0007173)           |
| -2.235 | endosomal transport (GO:0016197)  |





| NES    | SET   |
|--------|---|
| -3.194 | regulation of cholesterol biosynthetic process (GO:0045540) |
| 3.068  | mitotic nuclear envelope disassembly (GO:0007077)           |
| 3.010  | rRNA processing (GO:0006364)                                |
| -2.955 | histone H3 acetylation (GO:0043966)                         |
| 2.876  | mitotic cell cycle (GO:0000278)                             |
| -2.802 | mitochondrial translational elongation (GO:0070125)         |
| 2.703  | protein sumoylation (GO:0016925)                            |
| 2.687  | double-strand break repair (GO:0006302)                     |
| 2.648  | platelet aggregation (GO:0070527)                           |
| 2.645  | tRNA export from nucleus (GO:0006409)                       |
| 2.645  | regulation of glucose transport (GO:0010827)                |
| 2.645  | regulation of gene silencing by miRNA (GO:0060964)          |
| 2.628  | telomere capping (GO:0016233)                               |
| 2.611  | mitotic metaphase plate congression (GO:0007080)            |
| 2.602  | intracellular transport of virus (GO:0075733)               |
|        |   |



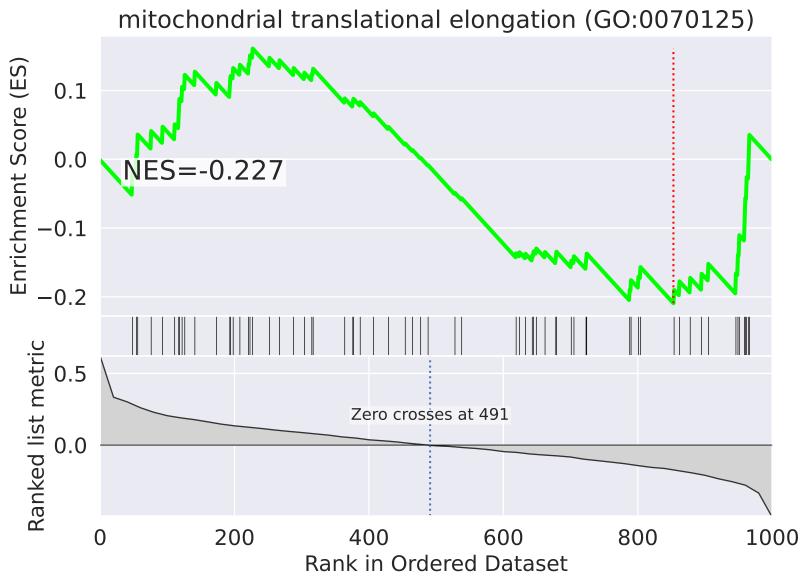


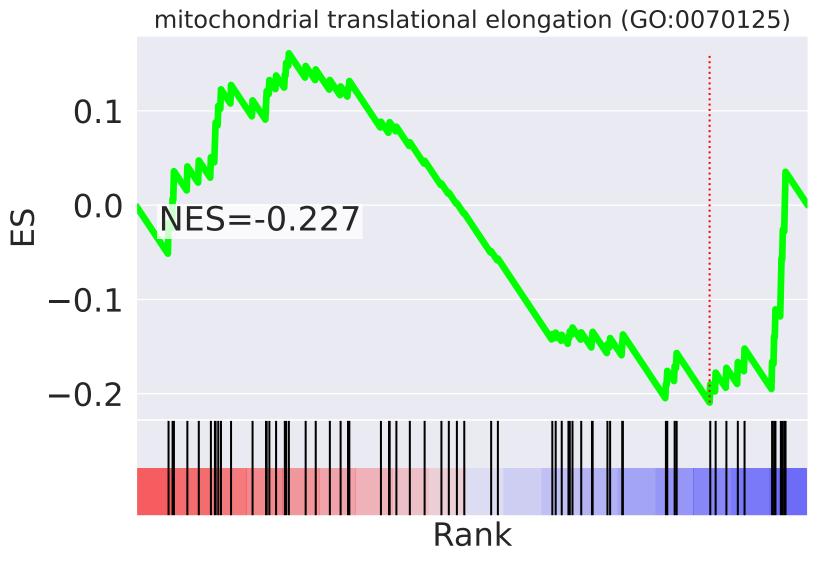
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|---|---|
| -2.512                                  | double-strand break repair via nonhomologous end joining (GO:0006303)                           |
| 2.439                                   | cell differentiation (GO:0030154)   |
| -2.395                                  | anaphase-promoting complex-dependent catabolic process (GO:0031145)                             |
| -2.356                                  | mitochondrial respiratory chain complex I assembly (GO:0032981)                                 |
| 2.342                                   | post-translational protein modification (GO:0043687)  |
| 2.252                                   | nucleus organization (GO:0006997)   |
| 2.251                                   | cholesterol biosynthetic process (GO:0006695)   |
| -2.205                                  | telomere capping (GO:0016233)   |
| -2.182                                  | protein K48-linked ubiquitination (GO:0070936)  |
| -2.182                                  | negative regulation of canonical Wnt signaling pathway (GO:0090090)                             |
| -2.177                                  | spermatogenesis (GO:0007283)  |
| -2.173                                  | protein K11-linked ubiquitination (GO:0070979)  |
| -2.168                                  | histone H4 acetylation (GO:0043967)   |
| 2.142                                   | viral life cycle (GO:0019058)   |
| 2.100                                   | positive regulation of sequence-specific DNA binding transcription factor activity (GO:0051091) |
|   |   |

NES

SET

| The three following figures visualize the negative control gene set enrichment analysis results for mitochondrial translational elongation (GO:0070125) in the latent dimension z=10 |
|--|
|  |





| NES    | SET  |
|--------|--|
| -3.213 | regulation of cholesterol biosynthetic process (GO:0045540)                |
| 3.121  | vascular endothelial growth factor receptor signaling pathway (GO:0048010) |
| 3.106  | cell-matrix adhesion (GO:0007160)  |
| 2.990  | integrin-mediated signaling pathway (GO:0007229)                           |
| 2.944  | intracellular signal transduction (GO:0035556)                             |
| -2.911 | cellular nitrogen compound metabolic process (GO:0034641)                  |
| 2.767  | Fc-gamma receptor signaling pathway involved in phagocytosis (GO:0038096)  |
| 2.685  | ubiquitin-dependent protein catabolic process (GO:0006511)                 |
| 2.656  | protein phosphorylation (GO:0006468)                                       |
| 2.647  | retrograde vesicle-mediated transport, Golgi to ER (GO:0006890)            |
| 2.596  | platelet aggregation (GO:0070527)  |
| 2.506  | movement of cell or subcellular component (GO:0006928)                     |
| 2.440  | ubiquitin-dependent ERAD pathway (GO:0030433)                              |
| 2.440  | retrograde protein transport, ER to cytosol (GO:0030970)                   |
| -2.435 | tricarboxylic acid cycle (GO:0006099)                                      |