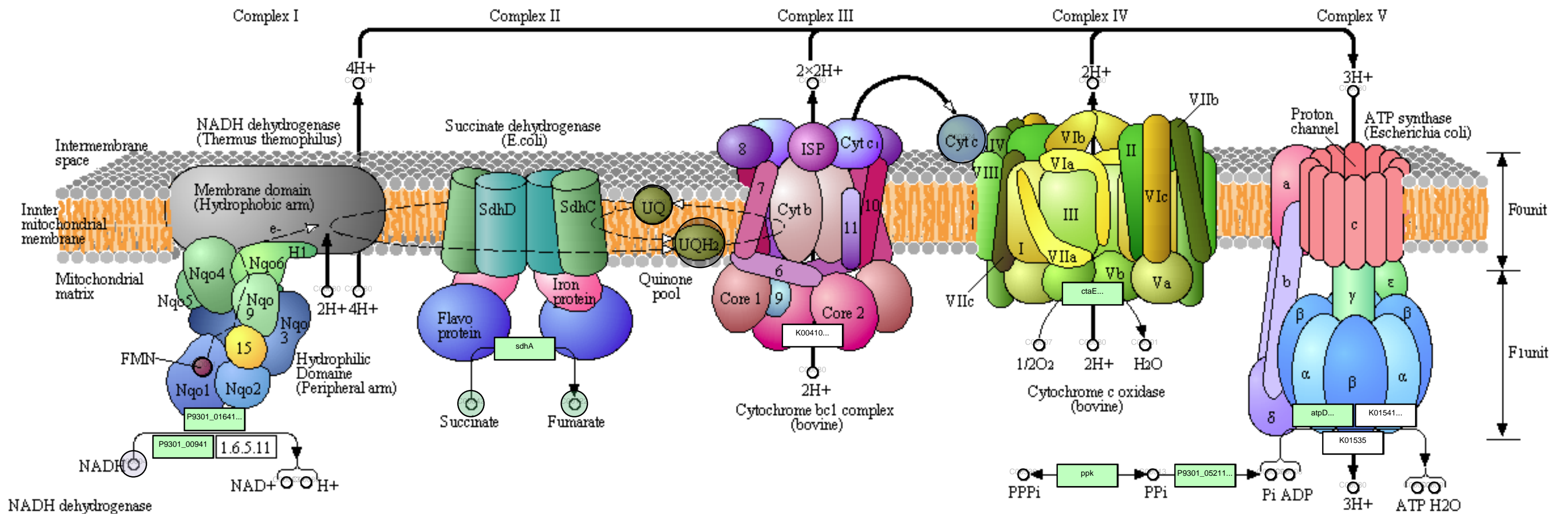


## OXIDATIVE PHOSPHORYLATION



NADH dehydrogenase

|     |        |           |           |           |        |        |        |        |        |                |        |             |             |             |        |        |        |
|-----|--------|-----------|-----------|-----------|--------|--------|--------|--------|--------|----------------|--------|-------------|-------------|-------------|--------|--------|--------|
| E   | K03878 | K03879    | K03880    | K03881    | K03882 | K03883 | K03884 |        |        |                |        |             |             |             |        |        |        |
| E   | K03934 | K03935    | K03936    | K03937    | K03938 | K03939 | K03940 | K03941 | K03942 | K03943         | K03944 |             |             |             |        |        |        |
| B/A | K00330 | K00331... | K00332... | K00333... | K00334 | K00335 | K00336 | K00337 | K00338 | K00339         | K00340 | K00341...   | K00342...   | K00343      |        |        |        |
| B/A | ndhC   | ndhK      | ndhJ      | ndhH      | ndhA   | ndhI   | ndhG   | ndhE   | ndhF   | P9301_01691... | ndhB   | P9301_05961 | P9301_01641 | P9301_17501 | K05586 | K05587 | K05588 |
| E   | K03945 | K03946    | K03947    | K03948    | K03949 | K03950 | K03951 | K03952 | K03953 | K03954         | K03955 | K03956      | K11352      | K11353      |        |        |        |
| E   | K03957 | K03958    | K03959    | K03960    | K03961 | K03962 | K03963 | K03964 | K03965 | K03966         | K11351 | K03967      | K03968      |             |        |        |        |

Succinate dehydrogenase / Fumarate reductase

|     |        |           |        |        |        |        |
|-----|--------|-----------|--------|--------|--------|--------|
| E   | K00236 | K00237    | K00234 | K00235 |        |        |
|     | K00241 | K00242... | sdhA   | K00240 |        |        |
| B/A |        |           | K00244 | K00245 | K00246 | K00247 |

## Cytochrome c reductase

|       |           |           |           |        |        |        |        |        |        |        |  |
|-------|-----------|-----------|-----------|--------|--------|--------|--------|--------|--------|--------|--|
| E/B/A | K00411... | K00410... | K00410... |        |        |        |        |        |        |        |  |
| F     |           |           |           | K00414 | K00415 | K00416 | K00417 | K00418 | K00419 | K00420 |  |

Cytochrome c oxidase

|   |        |        |        |        |        |                                  |           |           |        |        |           |        |        |        |        |                       |  |  |
|---|--------|--------|--------|--------|--------|----------------------------------|-----------|-----------|--------|--------|-----------|--------|--------|--------|--------|-----------------------|--|--|
| E | K02257 |        |        |        |        |                                  |           |           |        |        |           |        |        | E/B/A  |        | K02260                |  |  |
|   |        | K02262 | K02256 | K02261 | K02263 | K02264                           | K02265    | K02266    | K02267 | K02268 | K02269... | K02271 | K02272 | K02273 | K02258 | ctaA                  |  |  |
|   | B/A    | cyoE   | K02300 | K02299 | K02298 | K02297                           |           |           |        |        |           |        |        |        |        |                       |  |  |
|   |        | K02277 | ctaE   | cyoB   | cyoA   | Cytochrome c oxidase , cbb3-type |           |           |        |        |           |        |        |        |        | Cytochrome bd complex |  |  |
|   |        | K02829 | K02828 | K02827 | K02826 | B                                | K00404... | K00405... | K00407 | K00406 | B/A       | K00425 | K00426 |        |        | V                     |  |  |

## Cytochrome c oxidase , cbb3-type

|   |           |           |        |        |
|---|-----------|-----------|--------|--------|
| B | K00404... | K00405... | K00407 | K00406 |
|---|-----------|-----------|--------|--------|

Cytochrome bd complex

|     |        |        |
|-----|--------|--------|
| B/A | K00425 | K00426 |
|-----|--------|--------|

### F-type ATPase (Bacteria)

|      |                |             |      |      |
|------|----------------|-------------|------|------|
| atpA | atpD           | P9301_16401 | atpH | atpC |
| atpB | P9301_16431... | atpE        |      |      |

F-type ATPase (Eukaryotes)

|           |        |           |        |        |           |
|-----------|--------|-----------|--------|--------|-----------|
| K02132    | K02133 | K02136    | K02134 | K02135 |           |
| K02137    | K02126 | K02127    | K02128 | K02138 | K02129... |
| K02130... | K02140 | K02131... | K02142 | K02143 | K02125    |

## V/A-type ATPase (Bacteria, Archaeas)

|        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|
| K02117 | K02118 | K02119 | K02120 | K02121 | K02122 | K02107 |
| K02123 | K02124 |        |        |        |        |        |

### V-type ATPase (Eukaryotes)

|        |           |        |        |        |        |        |        |
|--------|-----------|--------|--------|--------|--------|--------|--------|
| K02145 | K02147    | K02148 | K02149 | K02150 | K02151 | K02152 | K02144 |
| K02154 | K02155... | K02146 | K02153 | K03662 |        |        |        |