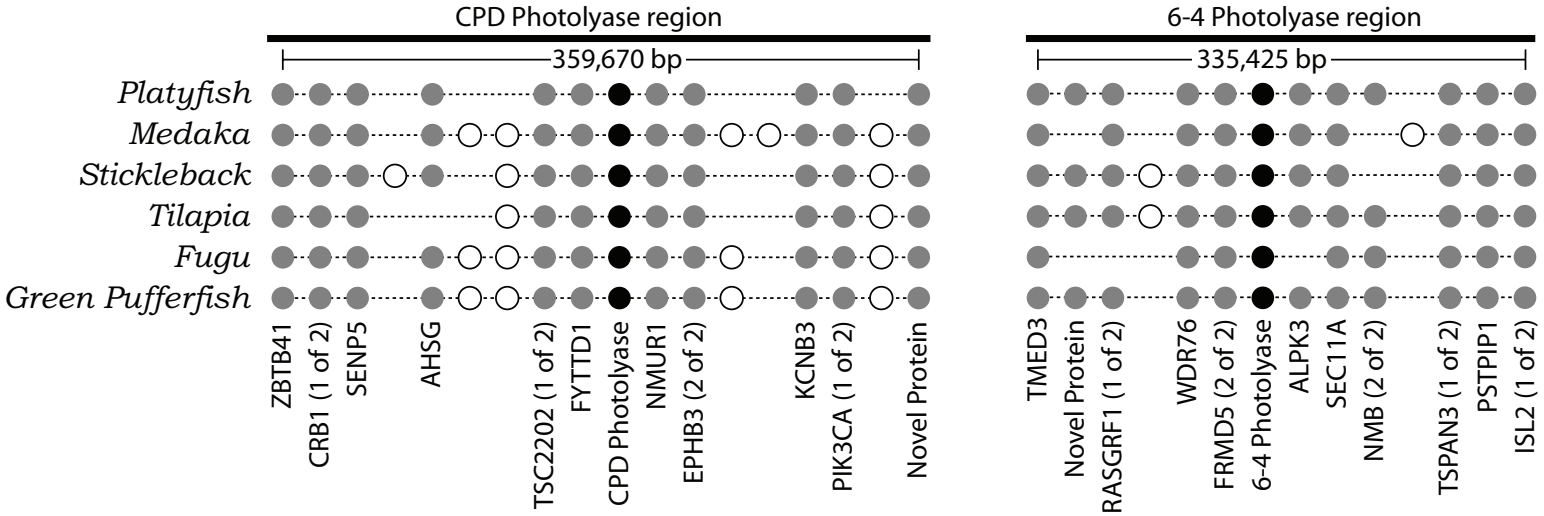
| Common Name | Species Name | Ensembl ID (*GenBank ID) |
|---|---|---|
| | | |
| ***CPD Photolyase*** | | |
| Anole | *Anolis carolinensis* | ENSACAP00000002887 |
| Chinese Softshell Turtle | *Pelodiscus sinensis* | ENSPSIP00000002288 |
| Xenopus | *Xenopus tropicalis* | ENSXETP00000061304 |
| Tasmanian Devil | *Sarcophilus harrisii* | ENSSHAP00000008296 |
| Opossum | *Monodelphis domestica* | ENSMODP00000022957 |
| Chicken | *Gallus gallus* | ENSGALP00000012174 |
| Turkey | *Meleagris gallopavo* | ENSMGAP00000008046 |
| Zebra Finch | *Taeniopygia guttata* | ENSTGUP00000009898 |
| Lamprey | *Petromyzon marinus* | ENSPMAP00000001760 |
| Spotted Gar | *Lepisosteus oculatus* | *gi\|372204014\|gb\|CM001417.1 |
| Cod | *Gadus morhua* | ENSGMOP00000002255 |
| Fugu | *Takifugu rubripes* | ENSTRUP00000022070 |
| Medaka | *Oryzias latipes* | ENSORLP00000011334 |
| Platyfish | *Xiphophorus maculatus* | ENSXMAP00000004759 |
| Stickleback | *Gasterosteus aculeatus* | ENSGACP00000021220 |
| Tetraodon | *Tetraodon nigroviridis* | ENSTNIP00000010632 |
| Tilapia | *Oreochromis niloticus* | ENSONIP00000013471 |
| Zebrafish | *Danio rerio* | ENSDARP00000071745 |
| | | |
| ***6-4 Photolyase*** | | |
| Anole | *Anolis carolinensis* | ENSACAP00000021844 |
| Chinese Softshell Turtle | *Pelodiscus sinensis* | ENSPSIP00000015084 |
| Xenopus | *Xenopus tropicalis* | ENSXETP00000008500 |
| Spotted Gar | *Lepisosteus oculatus* | *gi\|372204002\|gb\|CM001429.1 |
| Cod | *Gadus morhua* | ENSGMOP00000018712 |
| Fugu | *Takifugu rubripes* | ENSTRUP00000008892 |
| Medaka | *Oryzias latipes* | ENSORLP00000015604 |
| Platyfish | *Xiphophorus maculatus* | ENSXMAP00000017152 |
| Stickleback | *Gasterosteus aculeatus* | ENSGACP00000021707 |
| Tetraodon | *Tetraodon nigroviridis* | ENSTNIP00000001432 |
| Tilapia | *Oreochromis niloticus* | ENSONIP00000003188 |
| Zebrafish | *Danio rerio* | ENSDARP00000015621 |

| | Tissue | *X. maculatus* | *X. couchianus* | Hybrid $F_1$ |
|---|---|---|---|---|
| CPD PL | Skin | 3.63E-04 ± 9.48E-05 | 9.48E-05 ± 3.42E-05 | 3.42E-05 ± 1.22E-05 |
| | Eyes | 1.65E-04 ± 3.20E-05 | 3.20E-05 ± 1.11E-04 | 1.11E-04 ± 5.72E-06 |
| | Gill | 2.48E-04 ± 5.02E-05 | 5.02E-05 ± 2.42E-04 | 2.42E-04 ± 2.06E-05 |
| | Brain | 1.59E-03 ± 6.25E-05 | 6.25E-05 ± 4.71E-04 | 4.71E-04 ± 1.14E-04 |
| | Heart | 1.13E-04 ± 7.55E-05 | 7.55E-05 ± 2.45E-04 | 2.45E-04 ± 9.68E-05 |
| | Testes | 9.28E-05 ± 2.62E-06 | 2.62E-06 ± 8.03E-04 | 8.03E-04 ± 7.67E-05 |
| | Liver | 4.68E-05 ± 2.87E-06 | 2.87E-06 ± 2.97E-06 | 2.97E-06 ± 3.46E-07 |
| 6-4 PL | Skin | 4.06E-04 ± 1.31E-04 | 1.31E-04 ± 1.90E-04 | 1.90E-04 ± 2.38E-05 |
| | Eyes | 5.08E-04 ± 7.28E-05 | 7.28E-05 ± 2.80E-04 | 2.80E-04 ± 1.38E-05 |
| | Gill | 1.04E-03 ± 1.04E-04 | 1.04E-04 ± 3.83E-04 | 3.83E-04 ± 4.06E-05 |
| | Brain | 2.46E-04 ± 8.00E-06 | 8.00E-06 ± 5.52E-04 | 5.52E-04 ± 1.41E-04 |
| | Heart | 2.12E-04 ± 6.91E-05 | 6.91E-05 ± 1.25E-03 | 1.25E-03 ± 3.12E-04 |
| | Testes | 1.07E-04 ± 6.31E-06 | 6.31E-06 ± 6.21E-04 | 6.21E-04 ± 1.23E-04 |
| | Liver | 1.27E-04 ± 2.36E-05 | 2.36E-05 ± 2.29E-04 | 2.29E-04 ± 3.81E-05 |

| Experiment | Tissue | *X. maculatus* | *X. couchianus* | Hybrid $F_1$ |
|---|---|---|---|---|
| | Skin | 3.63E-04 ± 9.48E-05 | 3.42E-05 ± 1.22E-05 | 9.99E-04 ± 1.62E-04 |
| | Eyes | 1.65E-04 ± 3.20E-05 | 1.11E-04 ± 5.72E-06 | 5.57E-04 ± 5.20E-05 |
| | Brain | 1.59E-03 ± 4.25E-05 | 4.71E-04 ± 1.14E-04 | 1.03E-03 ± 1.18E-04 |
| | Gill | 2.48E-04 ± 5.02E-05 | 2.42E-04 ± 2.06E-05 | 5.33E-04 ± 6.09E-05 |
| Basal | Liver | 4.68E-05 ± 2.87E-06 | 2.97E-06 ± 3.46E-07 | 6.12E-06 ± 5.59E-07 |
| | Skin | 1.62E-03 ± 1.18E-05 | 1.34E-04 ± 1.58E-05 | 1.07E-04 ± 3.39E-06 |
| | Eyes | 2.65E-03 ± 9.32E-05 | 1.86E-04 ± 5.45E-06 | 7.99E-04 ± 2.16E-05 |
| | Brain | 2.53E-03 ± 8.26E-05 | 9.37E-04 ± 2.61E-05 | 1.26E-03 ± 1.33E-04 |
| | Gill | 2.06E-03 ± 1.96E-05 | 5.77E-04 ± 5.53E-06 | 7.02E-04 ± 1.51E-05 |
| 2+4 | Liver | 7.07E-04 ± 3.61E-05 | 1.46E-04 ± 1.79E-06 | 5.39E-04 ± 5.62E-06 |
| | Skin | 2.11E-03 ± 1.32E-05 | 1.14E-03 ± 9.10E-05 | 3.34E-04 ± 5.19E-06 |
| | Eyes | 4.60E-04 ± 5.18E-06 | 6.09E-04 ± 5.26E-05 | 4.23E-04 ± 6.68E-05 |
| | Brain | 1.73E-03 ± 1.08E-05 | 1.33E-03 ± 3.20E-05 | 6.85E-04 ± 1.75E-05 |
| | Gill | 5.70E-04 ± 6.33E-05 | 1.16E-03 ± 1.72E-05 | 7.78E-04 ± 2.54E-05 |
| 2+6 | Liver | 5.42E-05 ± 1.83E-06 | 1.10E-04 ± 2.88E-06 | 3.06E-04 ± 3.14E-06 |

| Experiment | Tissue | *X. maculatus* | *X. couchianus* | Hybrid $F_1$ |
|---|---|---|---|---|
| | Skin | 4.06E-04 ± 1.31E-04 | 1.90E-04 ± 2.38E-05 | 5.84E-04 ± 1.07E-04 |
| | Eyes | 5.08E-04 ± 7.28E-05 | 2.80E-04 ± 1.38E-05 | 8.20E-04 ± 2.35E-04 |
| | Brain | 2.46E-04 ± 8.00E-06 | 5.52E-04 ± 1.41E-04 | 5.41E-04 ± 8.42E-05 |
| | Gill | 1.04E-03 ± 1.04E-04 | 3.83E-04 ± 4.06E-05 | 6.05E-04 ± 2.89E-05 |
| Basal | Liver | 1.27E-04 ± 2.36E-05 | 2.29E-04 ± 3.81E-05 | 7.97E-05 ± 6.10E-06 |
| | Skin | 1.06E-03 ± 6.43E-06 | 7.72E-04 ± 5.67E-06 | 1.17E-04 ± 3.39E-06 |
| | Eyes | 4.40E-03 ± 1.05E-04 | 2.80E-03 ± 4.32E-07 | 1.34E-03 ± 1.65E-05 |
| | Brain | 3.30E-03 ± 2.95E-05 | 2.75E-03 ± 3.07E-05 | 5.63E-04 ± 9.43E-05 |
| | Gill | 2.06E-03 ± 1.96E-05 | 1.51E-03 ± 8.79E-06 | 3.50E-04 ± 4.53E-06 |
| 2+4 | Liver | 1.73E-03 ± 2.55E-05 | 3.29E-04 ± 1.80E-06 | 6.67E-04 ± 5.62E-06 |
| | Skin | 1.09E-03 ± 7.72E-06 | 7.23E-03 ± 6.47E-05 | 4.24E-04 ± 5.19E-06 |
| | Eyes | 5.46E-04 ± 1.83E-05 | 1.80E-03 ± 1.17E-05 | 3.13E-04 ± 2.10E-05 |
| | Brain | 7.81E-04 ± 1.28E-05 | 2.99E-03 ± 8.02E-05 | 1.39E-03 ± 4.10E-07 |
| | Gill | 5.70E-04 ± 6.33E-05 | 1.76E-03 ± 1.56E-05 | 2.09E-04 ± 2.56E-05 |
| 2+6 | Liver | 8.06E-05 ± 7.24E-07 | 2.62E-04 ± 8.60E-07 | 3.78E-04 ± 3.14E-06 |

| Transcript | Experiment | Tissue | *X. maculatus* | *X. couchianus* | Hybrid $F_1$ |
|---|---|---|---|---|---|
| CPD | 2+4 | Skin | 0.0001 | 0.0003 | 0.0016 |
| | | Eyes | 0.0008 | 0.0007 | 0.0014 |
| | | Brain | 0.0009 | 0.0127 | 0.0368 |
| | | Gill | 0.0001 | 0.0020 | 0.0008 |
| | | Liver | 0.0020 | 0.0001 | 0.0001 |
| | 2+6 | Skin | 0.0001 | 0.0034 | 0.0282 |
| | | Eyes | 0.0003 | 0.0056 | 0.1546 |
| | | Brain | 0.0457 | 0.0033 | 0.0269 |
| | | Gill | 0.0143 | 0.0006 | 0.0015 |
| | | Liver | 0.0915 | 0.0004 | 0.0001 |
| 6-4 PHR | 2+4 | Skin | 0.0195 | 0.0015 | 0.0253 |
| | | Eyes | 0.0005 | 0.0002 | 0.0891 |
| | | Brain | 0.0001 | 0.0001 | 0.8286 |
| | | Gill | 0.0053 | 0.0007 | 0.0065 |
| | | Liver | 0.0002 | 0.0657 | 0.0001 |
| | 2+6 | Skin | 0.0179 | 0.0001 | 0.1691 |
| | | Eyes | 0.5483 | 0.0050 | 0.0934 |
| | | Brain | 0.0004 | 0.0022 | 0.0049 |
| | | Gill | 0.0320 | 0.0005 | 0.0047 |
| | | Liver | 0.1088 | 0.3454 | 0.0003 |


CPD Photolyase region
359,670 bp
Platyfish
Medaka
Stickleback
Tilapia
Fugu
Green Pufferfish
ZBTB41
CRB1 (1 of 2)
SENP5
AHSG
TSC2202 (1 of 2)
FYTTD1
CPD Photolyase
NMUR1
EPHB3 (2 of 2)
KCNB3
PIK3CA (1 of 2)
Novel Protein
6-4 Photolyase region
335,425 bp
TMED3
Novel Protein
RASGRF1 (1 of 2)
WDR76
FRMD5 (2 of 2)
6-4 Photolyase
ALPK3
SEC11A
NMB (2 of 2)
TSPAN3 (1 of 2)
PSTPIP1
ISL2 (1 of 2)