

# **Candidate gene primer and probe sets used in this study**

## **Microsatellite Markers**

| Gene name | Forward Primer            | Reverse Primer              |
|-----------|---------------------------|-----------------------------|
| cryaa     | GGGAGGCTGCAGAGTACTGA      | CATACAGCCAGAGGCAGACA        |
| eya1      | CCCTAAGTCAGGAATTCAGTCTTCT | TCTGTTTGGCTCATCTCAACAT      |
| mao       | AGGCTGTACTTTGCTGGTA       | ATCTTTTAAATGGACAACCTTG      |
| mchr2     | AAACAGCAAAATCAGAGAACTGA   | ACCAGGGTTATTCCACCAAA        |
| ngn1      | CGTTTTCGTTTGACATTGCT      | GCTGGAGTGGGGTCTGTAAA        |
| nrg2      | GTCGCAGTCTCGGTCCAAA       | CTTATAGGTGCAGGTCTATAGCATATC |
| pmch      | CCAAACACACACCACCAAACT     | CTGCTTGAGACTAAACCCATGT      |
| pfn2      | TGTCTGCAAAAGTTGTCAA       | CTACATGGTCGGCTTAGGTT        |
| sert      | ACTGCCATGTCTAAATCTG       | CATGTAGCCCAGCACAGTGA        |
| th        | TGTGGCACAGCAACAAGTG       | TCTCCAGCAGCTTCAATGC         |
| tph2      | CTACGGCTCTTTCAGGTCAGTA    | AGGCAGAACACACCCTATGTAT      |

## **Taqman Primer and Probes**

| Gene name  | Forward Primer            | Reverse Primer               | Probe for surface fish allele | Probe for cavefish allele |
|------------|---------------------------|------------------------------|-------------------------------|---------------------------|
| 5ht1A      | AGGTTGGGAAAGCGATGCT       | ACCTGCTGTTTTTATTGGGTTTTT     | CAGAGAAAAACTGAAGAAA           | CAGAGAAAAACTGAAGAAGA      |
| 5ht2A      | ATGTGGTGCCCGTTCTTTG       | AATCATTAGTGAAGGGTCACAAGCT    | CTGGTGGTATGCGAC               | CTGGTGGTATGCAAC           |
| 5ht2B      | ACAGCTGCAGCCCAAGTGT       | TGTAATTGAGGACTGAAAACAGGAAA   | CACATGTGGATAAATG              | CACATGTGGATAAATT          |
| 5ht2C      | TCTATGAGACCAAGGCAT        | GTGAGTTAAGCTGAGACG           | N/A                           | CTCAAAGAGTTCCCGTCCCC      |
| 5ht2C_like | CAGTAGTGTCTGATTGATGGAACCA | CAATTAGAAGAAGAGCAGGAAAAATACA | AGGACTGGGAGTCT                | CAGGACTGGGATCC            |
| shroom2    | CAGATTGTGGTCCTCAGATAAGCA  | CAGCTCAAGTGTCTGATGGACAGT     | TCTGGTCTGGAGGCA               | CTCTGGTCTGGAAGC           |
| th2        | GCAGTGTACTCAACACACGGTAGTG | TTCAACTACAAACAGTGAGTACCAATCA | CTGTGAAACATGTAAAG             | CTGTGAAACATGTCAAGA        |

## **HybProbe and Primers used under Roche Light Cycler**

| Gene name | Forward Primer             | Reverse Primer         | Probe1                                 | Probe2                                       |
|-----------|----------------------------|------------------------|----------------------------------------|----------------------------------------------|
| drd1      | TTCTCACTGGCTGCTTTC         | CAAGGCATGACCAGGAT      | ACGCTGGTCTGTGCGG-Fluorescein           | LC Red 640-GTCACCAAATTCGCCACCTCCGC-Phosphate |
| mchr1     | TTACAGTGGAACATAGAACACATATC | TAGGTGTTTAACTGTAGACTGG | AGGGCCCGAAGATCAAGAGCATTTAA-Fluorescein | LC Red 640-TTGGGAAATGGGGAAATGGCAAA-Phosphate |

Note: Genomic markers for cryaa, shroom2 and mchr1 were newly designed in this study.