>AB358954.1 Padina thivyi mitochondrial cox3 gene for cytochrome oxidase subunit 3, partial cds, country: Japan: Kagoshima, Tanegashima

TGAAATCGCAGGTTAAATTAAGTCATCGTCATCCTTTTCATCTGGTAGATCCTAGCCCGTGGCCATTAGT

GGCCTCTATCGGTGCTTTAAGTCTAACGTTTGGTGGAGTGATGTTTATGCATAATTATTCTGGGGGTGGT

CAATTATTGTGTTTAGGGGTTATTACAGTATTATACGTTATGATAACTTGGTGGCGCGATATTATTAGAG

AAGCCGCGTCTGAAGGCCAGCATACGTCCGCGGTTCAAGACGGGTTGCGGTTAGGAATGATTCTATTTAT

TGTGTCGGAAGTTATGTTTTTTTTCGCCTTTTTTTGGGCTTTTTTTACTTCTTCCCTAGCTCCGGTTTTT

AATATAGGTGGTGTATGGCCCCCCGCAGGTCTAGAAGTTATTAGCCCATGGGGATTGCCCTTGTTAAATA

CTGTATTGCTTCTTTCTTCTGGTGCTACTGTGACTTGGGCGCATCATGCGATAGTAGGAGGGTTGAAGCG

GGAAGCACAGACAAGTTTGTATCTAACATTGACGTTCGCAATTTATTTTACAACTTTTCAGTTTTTAGAG

TATATTGAGGCCCCCTTTTCTATGTCAGATGGTGTTTATGGGTCTACCTTTTTTATGGCTACTGGTTTTC

ATGGTTTTCATGTTCTTATAGGAACTATTTTTTTGTCGATATGCGCGGTTCGGTTATACCTAGATCATTT

CAGTCGGCAGCATCATTTTGGTTTTGAAGCTGCG

Primers

OLIGO [start](https://primer3.ut.ee/cgi-bin/primer3/primer3/primer3web_help.cgi#p3w_primer_start)  [len](https://primer3.ut.ee/cgi-bin/primer3/primer3/primer3web_help.cgi#p3w_primer_len)  [tm](https://primer3.ut.ee/cgi-bin/primer3/primer3/primer3web_help.cgi#p3w_primer_tm)  [gc%](https://primer3.ut.ee/cgi-bin/primer3/primer3/primer3web_help.cgi#p3w_primer_gc)  [any\_th](https://primer3.ut.ee/cgi-bin/primer3/primer3/primer3web_help.cgi#p3w_primer_any)  [3'\_th](https://primer3.ut.ee/cgi-bin/primer3/primer3/primer3web_help.cgi#p3w_primer_three) [hairpin](https://primer3.ut.ee/cgi-bin/primer3/primer3/primer3web_help.cgi#p3w_primer_hairpin) [seq](https://primer3.ut.ee/cgi-bin/primer3/primer3/primer3web_help.cgi#p3w_primer_seq)

LEFT PRIMER 23 23 58.55 43.48 0.00 0.00 0.00 TCATCGTCATCCTTTTCATCTGG

RIGHT PRIMER 723 20 58.74 45.00 0.00 0.00 0.00 AACCAAAATGATGCTGCCGA

>AB512595.1 Padina tetrastromatica mitochondrial cox3 gene for cytochrome oxidase subunit 3, partial cds, country: Malaysia:Johor, Desaru

GGTGATCCTAGTCCATGGCCTTTAGTGGCCTCTATCGGTGCATTAAGCTTTACATTTGGGGGGGTGATGT

TTATGCATGACTACTCCGGAGGTGGTCGATTATTATGTTTAGGTGTTGTCACAGTATTATACGTTATGTT

TACGTGGTGGCGTGATATTATTAGAGAAGCCTCATTCGAGGGCCAGCACACTTCCGCGGTTCAGGACGGA

TTGCGCTTAGGTATGATTCTTTTTATCGTGTCAGAGGTTATGTTCTTTTTCGCCTTTTTTTGGGCTTTTT

TTACTTCTTCGTTGGCTCCGGTATTTAATATAGGTGGTGTGTGGCCACCCGCGGGGCTAGAAGTAATTAG

TCCTTGGGGATTACCCTTATTAAATACTGTATTACTTCTTTCTTCTGGCGCTACTGTAACTTGGGCGCAT

CATGCGATTGTAGGGGGATTAAAGCGGGAAGCGCAAACCGGTTTATATTTAACATTGACATTTGCGATCT

ACTTCACTACTTTTCAATTTTTAGAGTATGTAGAAGCCCCATTCTCTATGTCAGATGGTGTTTATGGGTC

GACATTCTTCATGGCTACAGGTTTTCATGGGTTTCATGTACTTATAGGGACTATTTTTTTAGCTATCTGC

GCGATTCGATTATACTTGGATCATTTTAGCAGACAGCATCATTTTGGTTTTGAAGCGGCAGCTTGGTATT

GGCACTT

>JQ364024.1 Padina sanctae-crucis voucher NC06011 cytochrome oxidase subunit 3 (cox3) gene, partial cds; mitochondrial

GTAGATCCTAGTCCATGGCCATTAGTAGCTTCTATTGGGGCTTTAAGTCTAACATTTGGGGGCGTGATGT

TTATGCATAATTATTCTGGGGGTGGTCAATTATTGTGTTTAGGAGTCGCCACGATACTATATGTTATGAT

AACGTGGTGGCGTGATATTATTAGGGAAGCCGCATTTGAAGGTCAACATACGTCCGCGGTTCAAGATGGG

TTGCGGTTAGGCATGATACTATTTATTGTTTCGGAGGTGATGTTTTTTTTTGCCTTTTTTTGGGCTTTTT

TTACTTCTTCGTTAGCCCCCGTCTTTAATATAGGGGGTGTATGGCCTCCGGCGGGTCTAGAGGTTATTAG

TCCTTGGGGATTGCCTTTACTAAATACTGTATTACTTCTATCTTCTGGTGCTACTGTGACTTGGGCACAT

CATGCTATCGTAGGTGGATTAAAGCGGGAAGCACAAACGGGTTTGTATTTAACACTTACTTTCGCAATTT

ATTTTACTACTTTTCAGTTTTTGGAGTATATAGAAGCCCCCTTTTCTATGTCAGACGGGGTTTACGGGTC

TACGTTCTTTATGGCTACTGGTTTTCATGGTTTTCATGTCCTTATAGGAACTATATTTTTGGCAATATGC

GGGGTTAGGTTGTATCTAGATCATTTTAGTCGGCAGCACCATTTTGGTTTTGAGGCTGCG

>AB489978.1 Padina undulata mitochondrial cox3 gene for cytochrome oxidase subunit 3, partial cds, isolate: ISH6

TGAAATCACAGGTTAAATTGAGTCATCGTCATCCCTTTCATTTGGTAGATCCGAGTCCATGGCCGTTAAT

AGCTTCTATCGGGGCTTTAAGTCTAACATTTGGGGGCGTGATGTTTATGCATAATTATTCTGGAGGTGGT

CAATTATTGTGTTTAGGCGTTGCTACAATACTATATGTTATGATAACTTGGTGGCGTGATATTATTAGAG

AAGCGGCATTTGAAGGTCAACATACGTCGGCGGTTCAAGACGGGTTGCGGTTAGGCATGATACTATTTAT

TGTTTCGGAGATTATGTTTTTTTTCGCCTTTTTCTGGGCTTTTTTTACGTCTTCATTAGCCCCAGTCTTT

AATATAGGGGGCGTGTGGCCTCCAGCAGGTCTGGAGGTTATTAGTCCTTGGGGATTACCTTTACTAAATA

CTGTATTGCTTCTTTCTTCTGGTGCTACTGTGACTTGGGCACATCATGCTATCGTAGGTGGATTAAAAAG

GGAAGCACAAACGGGTCTGTATCTAACATTGACTTTTGCAATTTATTTTACTACTTTTCAGTTTTTGGAG

TATATAGAAGCCCCCTTTTCTATGTCAGACGGGGTTTACGGGTCTACATTCTTTATGGCTACTGGTTTCC

ATGGTTTTCACGTTCTTATAGGAACTATATTTTTGGCAATCTGCGCGGTTAGGTTGTATTTAGATCATTT

TAGTCGGCAGCACCATTTTGGTTTTGAGGCGGCGGCTTGGTATTGGCA

>AB489975.1 Padina terricolor mitochondrial cox3 gene for cytochrome oxidase subunit 3, partial cds, isolate: OKI10

GTTAAATTGAGTCATCGTCATCCTTTTCATTTGGTAGATCCTAGTCCGTGGCCACTAGTAGCTTCTATTG

GGGCTTTAAGTCTAACATTTGGGGGCGTGATGTTTATGCATAATTATTCTGGGGGTGGTCAATTATTGTG

TTTAGGCGTCGCCACTATACTATATGTTATGATAACGTGGTGGCGGGATATTATTAGGGAAGCCGCATTT

GAAGGTCAACATACGTCCGCGGTTCAAGACGGGTTGCGGTTAGGCATGATACTATTTATTGTTTCGGAGG

TTATGTTTTTTTTTGCCTTTTTTTGGGCTTTTTTTACTTCTTCGTTAGCCCCCGTCTTTAATATAGGGGG

TGTGTGGCCTCCGGCGGGTCTAGAGGTTATTAGTCCCTGGGGATTACCCTTACTAAATACTGTATTACTT

CTGTCCTCTGGAGCTACTGTGACTTGGGCACATCATGCTATCGTAGGTGGATTAAAACGGGAAGCCCAAA

CAGGTTTATATCTAACACTGACTTTCGCAATTTATTTTACTACTTTTCAGTTTTTGGAGTATATAGAAGC

CCCTTTTTCTATGTCAGATGGGGTTTATGGGTCTACGTTCTTTATGGCTACTGGTTTTCATGGTTTTCAT

GTCCTTATAGGAACTATATTTTTGGCAATATGTGGGGTTAGGTTGTATTTAGATCATTTTAGTCGTCAGC

ACCAT