

# GENETIC BARCODE TESTER

Created by Clarke van Steenderen

Home: Barcode testing

Best Close Match

Nearest Neighbour

Threshold ID

Barcode Gap

Rosenberg's Test of Monophyly

Find Optimal Threshold Value

Display Distance Matrix

PLOT BASE FREQUENCIES

PLOT GC CONTENT

CLUSTERING TREE (fragment data)

Results of the barcode testing algorithms are viewed in the tabs at the top of the screen

1  
The user can upload nucleotide sequences or binary data

Select data type

Nucleotide sequences

Nucleotide sequences

ISSR/AFLP fragment analysis data

Click to view the help file:

Select data type

Nucleotide sequences

Upload a data file

Browse...

No file selected

Evolutionary model:

K80

Gamma shape (alpha)

0

☒ Pairwise deletion

Type in your outgroups:

LOAD DATA

3

Best Close Match

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Display Distance Matrix

Selection of tests

4

## GENETIC BARCODE TESTER

### USER GUIDE

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#### OVERVIEW

This program enables the user to test how efficient a set of genetic sequences are in allowing for their correct identification. The barcode testing algorithms implemented here are derived from the R package [SPIDER](#), (**S**pecies **I**ntity and **E**volution in **R**) developed by [Brown et al. \(2012\)](#). The program has been encoded to allow for both nucleotide and binary data input (such as ISSRs and AFLPs), which are subsequently converted into distance matrices.

A highly useful function is that of the setting of distance thresholds in order to minimise the occurrence of false positive and false negative identifications. This attempts to help answer the question of "How different must the specimens be before they are considered different species/lineages/haplotypes etc.?"

Evolutionary model:

K80

JC69

K80

F81

K81

F84

BH87

T92

TN92

row.names(data1)

1

ech

2

ech

3

ech

4

ech

5

cyl

6

cyl

7

chol

8

chol

9

chol

10

chol

11

cal

12

cal

13

cal

14

cal

15

big

16

big

2

After the data is uploaded, the sequence names appear in a table. These need to be edited such that all the same species/taxa of interest have the same name.