

# Package ‘mro’

May 9, 2026

**Type** Package

**Title** Multiple Correlation

**Version** 0.1.1

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**Description**

Computes multiple correlation coefficient when the data matrix is given and tests its significance.

**Depends** R (>= 3.1.0), MASS,matrixcalc

**License** GPL-2

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 6.0.1

**NeedsCompilation** no

**Repository** CRAN

**Date/Publication** 2017-04-16 16:24:55 UTC

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mcr	<i>Multiple Correlation</i>
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## Description

Computes Mutiple Correlation Coefficient between one variable and a set of variables

**Usage**

```
mcr(dda, ld, rd, rawdata = T)
```

**Arguments**

dda	Data
ld	Dependent Variable
rd	vector of independent variables
rawdata	a boolean variable taking F if the input is a correlation matrix T if it is data matrix

**Value**

Returns the value of Multiple Correlation between dependent and independent variables

**Author(s)**

Abirami S

**Examples**

```
## Example 1:
mcr(iris[,-5],1,c(2,3,4)) ## Returns multiple correlation between Sepal.Length
                          ## and the other variables

## Example 2
mu<-c(10,12,13,14)
sig<-matrix(0,4,4)
diag(sig)<-c(2,1,1,3)
da<-MASS::mvrnorm(25,mu,sig)
mcr(da, 2,c(1,3,4))      ## Returns Multiple correlation when the data matrix
                          ## simulated from a quadrivariate normal distribution
                          ## is given as input

## Example 3
da<-var(iris[,-5])
mcr(da,3,c(1,2,4),FALSE) ## Returns multiple correlation between Petal.Width
                          ## and the other variables when the correlation matrix
                          ## is given as input
```

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mcr.test

*Multiple Correlation Test of Significance*

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**Description**

Tests the significance of mutiple correlation coefficient

**Usage**

```
mcr.test(x, ld, rd)
```

**Arguments**

x	Data Matrix or Variance Covariance or Correlation matrix
ld	Label of dependent Variable
rd	Vector of labels of independent variables

**Value**

a htest class object

**Author(s)**

Abirami S

**Examples**

```
## Example
library(MASS)
mu<-c(10,12,13,14)
sig<-matrix(0,4,4)
diag(sig)<-c(2,1,1,2)
da<-mvrnorm(25,mu,sig)
mcr.test(da,1,c(2:4))
```

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