

# Package ‘assertive’

October 8, 2015

**Type** Package

**Title** Readable Check Functions to Ensure Code Integrity

**Version** 0.3-1

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**Description** Lots of is\_\* functions to check the state of your variables,  
and assert\_\* functions to throw errors if they aren't in the right form.

**Depends** R (>= 3.0.0)

**Imports** assertive.base (>= 0.0-2), assertive.properties,  
assertive.types, assertive.numbers, assertive.strings,  
assertive.dates, assertive.files, assertive.sets,  
assertive.matrices, assertive.models, assertive.data,  
assertive.data.uk, assertive.data.us, assertive.reflection,  
assertive.code, knitr

**Suggests** testthat, devtools

**License** GPL (>= 3)

**LazyLoad** yes

**LazyData** yes

**VignetteBuilder** knitr

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**NeedsCompilation** no

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**R topics documented:**

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are_identical	<i>Are the inputs identical?</i>
---------------	----------------------------------

---

### Description

See [are\\_identical](#).

---

are_same_length	<i>Are the inputs the same length/dimension?</i>
-----------------	--

---

### Description

See [are\\_same\\_length](#).

---

assertionError	<i>Condition classes</i>
----------------	--------------------------

---

**Description**

See [assertionError](#).

---

assertive	<i>Readable check functions to ensure code integrity.</i>
-----------	---

---

**Description**

assertive contains lots of `is_*` functions to check the state of your variables, and `assert_*` functions to throw errors if they aren't in the right form.

**Details**

When the package loads, it creates a global option "assertive.severity" that determines what happens when an `assert_*` function's input fails the condition. By default, an error is thrown but it is possible to generate warnings or messages instead (see the examples).

**Author(s)**

Richard Cotton <richierocks@gmail.com>

**Examples**

```
is_numeric(1:10)
assert_all_are_positive(1:10)
dont_stop(assert_is_scalar(runif(10)))
```

---

assert_engine	<i>Throws an error if a condition isn't met</i>
---------------	---

---

**Description**

See [assert\\_engine](#).

---

assert_is_all_of	<i>Does x belong to these classes?</i>
------------------	--

---

**Description**

See [assert\\_is\\_all\\_of](#).

---

bapply	<i>Wrapper to vapply that returns booleans.</i>
--------	---

---

**Description**

See [bapply](#).

---

call_and_name	<i>Call a function, and give the result names.</i>
---------------	--

---

**Description**

See [call\\_and\\_name](#).

---

cause	<i>Get or set the "cause" attribute</i>
-------	---

---

**Description**

See [cause](#).

---

changes	<i>Important changes to assertive</i>
---------	---------------------------------------

---

**Description**

Changes since 0.3-0:

**Virtuality**

The assertive package is now a virtual package: that is, it no longer contains its own functions, but instead reexports them from lower-level packages.

For interactive use, you can carry on using assertive as before.

For programmatic use, you can have more fine-grained control over what gets loaded by using the lower-level packages.

`assertive.base` contains the core functionality. `assertive.properties` contains checks on properties of variables. `assertive.types` contains checks on types of variables. `assertive.numbers` contains checks for numbers. `assertive.strings` contains checks for strings. `assertive.dates` contains checks for dates and times. `assertive.files` contains checks for files and connections. `assertive.sets` contains checks for sets. `assertive.matrices` contains checks for matrices. `assertive.models` contains checks for models. `assertive.data` contains checks for complex data types. `assertive.data.uk` contains checks for UK-specific complex data types. `assertive.data.us` contains checks for US-specific complex data types. `assertive.reflection` contains checks on the state of R. `assertive.code` contains checks for code.

**Translations**

The infrastructure for errors and warnings in multiple languages is in place, and translations are planned for future versions. If you want to be a translator, email me at <richierocks@gmail.com>.

---

character\_to\_list\_of\_integer\_vectors  
*Convert a character vector to a list of integer vectors*

---

**Description**

See [character\\_to\\_list\\_of\\_integer\\_vectors](#).

---

coerce\_to *Coerce variable to a different class*

---

**Description**

See [coerce\\_to](#).

---

DIM *Get the dimensions of an object*

---

**Description**

See [DIM](#).

See [DIM](#).

---

dont\_stop *Run code without stopping*

---

**Description**

See [dont\\_stop](#).

---

false *FALSE, with a cause of failure*

---

**Description**

See [false](#).

---

`get_name_in_parent`      *Get the name of a variable in the parent frame*

---

**Description**

See [get\\_name\\_in\\_parent](#).

---

`has_any_attributes`      *Does the input have any attributes?*

---

**Description**

See [has\\_any\\_attributes](#).

---

`has_arg`      *Does the current call have an argument?*

---

**Description**

See [has\\_arg](#).

---

`has_attributes`      *Does the input have the specified attributes?*

---

**Description**

See [has\\_attributes](#).

---

`has_cols`      *Does the input have rows/columns?*

---

**Description**

See [has\\_cols](#).



---

has_dims	<i>Does the input have dimensions?</i>
----------	--

---

**Description**

See [has\\_dims](#).

---

has_duplicates	<i>Does the input have duplicates?</i>
----------------	--

---

**Description**

See [has\\_duplicates](#).

---

has_names	<i>Does the input have names?</i>
-----------	-----------------------------------

---

**Description**

See [has\\_names](#).

---

has_terms	<i>Does the input have terms?</i>
-----------	-----------------------------------

---

**Description**

See [has\\_terms](#).

---

is2	<i>Alternative version of is</i>
-----	----------------------------------

---

**Description**

See [is2](#).

---

is_array	<i>Is the input an array or matrix?</i>
----------	---

---

**Description**

See [is\\_array](#).

---

is_atomic	<i>Is the input atomic/recursive/vector?</i>
-----------	--

---

**Description**

See [is\\_atomic](#).

---

is_batch_mode	<i>How is R running?</i>
---------------	--------------------------

---

**Description**

See [is\\_batch\\_mode](#).

---

is_binding_locked	<i>Is the binding of a variable locked?</i>
-------------------	---

---

**Description**

See [is\\_binding\\_locked](#).

---

is_cas_number	<i>Does the character vector contain CAS registry numbers?</i>
---------------	--

---

**Description**

See [is\\_cas\\_number](#).

---

is_character	<i>Is the input of type character?</i>
--------------	--

---

**Description**

See [is\\_character](#).

---

is_class	<i>Is the input the name of a (formally defined) class?</i>
----------	---

---

**Description**

See [is\\_class](#).

---

is_complex	<i>Is the input complex?</i>
------------	------------------------------

---

**Description**

See [is\\_complex](#).

---

is_connection	<i>Is the input a connection?</i>
---------------	-----------------------------------

---

**Description**

See [is\\_connection](#).

---

is_credit_card_number	<i>Does the character vector contain credit card numbers?</i>
-----------------------	---

---

**Description**

See [is\\_credit\\_card\\_number](#).

---

<code>is_data.frame</code>	<i>Is the input a data.frame?</i>
----------------------------	-----------------------------------

---

**Description**

See [is\\_data.frame](#).

---

<code>is_data.table</code>	<i>Is the input a data.table?</i>
----------------------------	-----------------------------------

---

**Description**

See [is\\_data.table](#).

---

<code>is_date</code>	<i>Is the input a date?</i>
----------------------	-----------------------------

---

**Description**

See [is\\_date](#).

---

<code>is_date_string</code>	<i>Does the character vector contain dates?</i>
-----------------------------	---

---

**Description**

See [is\\_date\\_string](#).

---

<code>is_debugged</code>	<i>Is the input function being debugged?</i>
--------------------------	--

---

**Description**

See [is\\_debugged](#).

---

*is\_diagonal\_matrix*      *Is the input a diagonal matrix?*

---

**Description**

See [is\\_diagonal\\_matrix](#).

---

*is\_dir*      *Is the path a directory?*

---

**Description**

See [is\\_dir](#).

---

*is\_divisible\_by*      *Is the input divisible by a number?*

---

**Description**

See [is\\_divisible\\_by](#).

---

*is\_email\_address*      *Does the character vector contain email addresses?*

---

**Description**

See [is\\_email\\_address](#).

---

*is\_empty*      *Is the input empty/scalar?*

---

**Description**

See [is\\_empty](#).

---

is_empty_character	<i>Does the input contain empty or missing strings?</i>
--------------------	---

---

**Description**

See [is\\_empty\\_character](#).

---

is_empty_file	<i>Is a file empty?</i>
---------------	-------------------------

---

**Description**

See [is\\_empty\\_file](#).

---

is_empty_model	<i>Is the input the empty model?</i>
----------------	--------------------------------------

---

**Description**

See [is\\_empty\\_model](#).

---

is_environment	<i>Is the input an environment?</i>
----------------	-------------------------------------

---

**Description**

See [is\\_environment](#).

---

is_equal_to	<i>How does the input relate to a value?</i>
-------------	--

---

**Description**

See [is\\_equal\\_to](#).

---

is_error_free	<i>Does the code run without throwing an error?</i>
---------------	---

---

**Description**

See [is\\_error\\_free](#).

---

is_executable_file	<i>Is the file accessible?</i>
--------------------	--------------------------------

---

**Description**

See [is\\_executable\\_file](#).

---

is_existing	<i>Does the variable exist?</i>
-------------	---------------------------------

---

**Description**

See [is\\_existing](#).

---

is_existing_file	<i>Does the file exist?</i>
------------------	-----------------------------

---

**Description**

See [is\\_existing\\_file](#).

---

is_factor	<i>Is the input a factor?</i>
-----------	-------------------------------

---

**Description**

See [is\\_factor](#).

---

is_finite	<i>Are the inputs (in)finite?</i>
-----------	-----------------------------------

---

**Description**

See [is\\_finite](#).

---

is_function	<i>Is the input a function?</i>
-------------	---------------------------------

---

**Description**

See [is\\_function](#).

---

is_hex_color	<i>Does the character vector contain hex colors?</i>
--------------	--

---

**Description**

See [is\\_hex\\_color](#).

---

is_honorific	<i>Is the string an honorific?</i>
--------------	------------------------------------

---

**Description**

See [is\\_honorific](#).

---

is_identity_matrix	<i>Is the input an identity matrix?</i>
--------------------	---

---

**Description**

See [is\\_identity\\_matrix](#).



---

is_if_condition	<i>Is suitable to be used as an if condition</i>
-----------------	--

---

**Description**

See [is\\_if\\_condition](#).

---

is_inherited_from	<i>Does the object inherit from some class?</i>
-------------------	---

---

**Description**

See [is\\_inherited\\_from](#).

---

is_integer	<i>Is the input an integer?</i>
------------	---------------------------------

---

**Description**

See [is\\_integer](#).

---

is_in_past	<i>Is the input in the past/future?</i>
------------	---

---

**Description**

See [is\\_in\\_past](#).

---

is_in_range	<i>Is the input in range?</i>
-------------	-------------------------------

---

**Description**

See [is\\_in\\_range](#).

---

is_ip_address	<i>Does the character vector contain IP addresses?</i>
---------------	--

---

**Description**

See [is\\_ip\\_address](#).

---

is_isbn_code	<i>Does the character vector contain ISBN book codes?</i>
--------------	---

---

**Description**

See [is\\_isbn\\_code](#).

---

is_language	<i>Is the input a language object?</i>
-------------	--

---

**Description**

See [is\\_language](#).

---

is_leaf	<i>Is the input a (dendrogram) leaf?</i>
---------	--

---

**Description**

See [is\\_leaf](#).

---

is_library	<i>Is the directory a known R library?</i>
------------	--

---

**Description**

See [is\\_library](#).

---

is_list	<i>Is the input a list?</i>
---------	-----------------------------

---

**Description**

See [is\\_list](#).

---

is_loaded	<i>Is the input DLL loaded?</i>
-----------	---------------------------------

---

**Description**

See [is\\_loaded](#).

---

is_logical	<i>Is the input logical?</i>
------------	------------------------------

---

**Description**

See [is\\_logical](#).

---

is_lower_triangular_matrix	<i>Is the matrix upper/lower triangular?</i>
----------------------------	--

---

**Description**

See [is\\_lower\\_triangular\\_matrix](#).

---

is_nan	<i>Is the input (not) NaN?</i>
--------	--------------------------------

---

**Description**

See [is\\_nan](#).

---

is_null	<i>Checks to see if the input is (not) null.</i>
---------	--

---

**Description**

See [is\\_null](#).

---

is_numeric	<i>Is the input numeric?</i>
------------	------------------------------

---

**Description**

See [is\\_numeric](#).

---

is_numeric_string	<i>Does the string contain a number?</i>
-------------------	--

---

**Description**

See [is\\_numeric\\_string](#).

---

is_on_os_path	<i>Is the path on the OS path?</i>
---------------	------------------------------------

---

**Description**

See [is\\_on\\_os\\_path](#).

---

is_package_current	<i>Is the installed version of a package current?</i>
--------------------	---

---

**Description**

See [is\\_package\\_current](#).

---

is_qr	<i>Is the input a QR decomposition of a matrix?</i>
-------	---

---

**Description**

See [is\\_qr](#).

---

is_r	<i>Are you running R?</i>
------	---------------------------

---

**Description**

See [is\\_r](#).

---

is_raster	<i>Is the input a raster?</i>
-----------	-------------------------------

---

**Description**

See [is\\_raster](#).

---

is_raw	<i>Is the input raw?</i>
--------	--------------------------

---

**Description**

See [is\\_raw](#).

---

is_real	<i>Is the input real/imaginary?</i>
---------	-------------------------------------

---

**Description**

See [is\\_real](#).

---

is_relistable	<i>Is the input relistable?</i>
---------------	---------------------------------

---

**Description**

See [is\\_relistable](#).

---

is_rstudio_current	<i>Is RStudio the current version?</i>
--------------------	--

---

**Description**

See [is\\_rstudio\\_current](#).

---

is_rstudio_desktop	<i>Is RStudio running in desktop or server mode?</i>
--------------------	--

---

**Description**

See [is\\_rstudio\\_desktop](#).

---

is_r_current	<i>Is this version of R up to date?</i>
--------------	---

---

**Description**

See [is\\_r\\_current](#).

---

is_s4	<i>Is the input an S4 object?</i>
-------	-----------------------------------

---

**Description**

See [is\\_s4](#).

---

is_set_equal	<i>Set comparisons</i>
--------------	------------------------

---

**Description**

See [is\\_set\\_equal](#).

---

is_single_character	<i>Is the input a single character?</i>
---------------------	---

---

**Description**

See [is\\_single\\_character](#).

---

is_square_matrix	<i>Is the input a square matrix?</i>
------------------	--------------------------------------

---

**Description**

See [is\\_square\\_matrix](#).

---

is_symmetric_matrix	<i>Is the input a symmetric matrix?</i>
---------------------	---

---

**Description**

See [is\\_symmetric\\_matrix](#).

---

is_table	<i>Is the input a table?</i>
----------	------------------------------

---

**Description**

See [is\\_table](#).

---

is_tbl	<i>Is the input a tbl?</i>
--------	----------------------------

---

**Description**

See [is\\_tbl](#).

---

is_try_error	<i>Is the input a condition?</i>
--------------	----------------------------------

---

**Description**

See [is\\_try\\_error](#).

---

is_ts	<i>Is the input a time series?</i>
-------	------------------------------------

---

**Description**

See [is\\_ts](#).

---

is_uk_car_licence	<i>Is the string a valid UK car licence plate number?</i>
-------------------	---

---

**Description**

See [is\\_uk\\_car\\_licence](#).

---

is_uk_national_insurance_number	<i>Is the string a valid UK national insurance number?</i>
---------------------------------	--

---

**Description**

See [is\\_uk\\_national\\_insurance\\_number](#).



---

is_uk_postcode	<i>Is the string a valid UK postcode?</i>
----------------	---

---

**Description**

See [is\\_uk\\_postcode](#).

---

is_uk_telephone_number	<i>Is the string a valid UK telephone number?</i>
------------------------	---

---

**Description**

See [is\\_uk\\_telephone\\_number](#).

---

is_unsorted	<i>Is the input unsorted?</i>
-------------	-------------------------------

---

**Description**

See [is\\_unsorted](#).

---

is_us_social_security_number	<i>Is the string a valid US SSN?</i>
------------------------------	--------------------------------------

---

**Description**

See [is\\_us\\_social\\_security\\_number](#).

---

is_us_telephone_number	<i>Is the string a valid US telephone number?</i>
------------------------	---

---

**Description**

See [is\\_us\\_telephone\\_number](#).

---

is_us_zip_code	<i>Is the string a valid US zip code?</i>
----------------	---

---

**Description**

See [is\\_us\\_zip\\_code](#).

---

is_valid_r_code	<i>Is the input valid R code?</i>
-----------------	-----------------------------------

---

**Description**

See [is\\_valid\\_r\\_code](#).

---

is_valid_variable_name	<i>Is the string a valid variable name?</i>
------------------------	---

---

**Description**

See [is\\_valid\\_variable\\_name](#).

---

is_whole_number	<i>Is the input a whole number?</i>
-----------------	-------------------------------------

---

**Description**

See [is\\_whole\\_number](#).

---

is_windows	<i>What OS is running?</i>
------------	----------------------------

---

**Description**

See [is\\_windows](#).

---

is\_xxx\_for\_decimal\_point

*What does the current locale specify for the decimal point?*

---

**Description**

See [is\\_xxx\\_for\\_decimal\\_point](#).

---

is\_zero\_matrix

*Is the input a zero matrix?*

---

**Description**

See [is\\_zero\\_matrix](#).

---

merge\_dots\_with\_list

*Merge ellipsis args with a list.*

---

**Description**

See [merge\\_dots\\_with\\_list](#).

---

na

*NA, with a cause of failure*

---

**Description**

See [na](#).

---

n\_elements

*Get the number of elements*

---

**Description**

See [n\\_elements](#).

See [n\\_elements](#).

---

parenthesize	<i>Wrap a string in brackets</i>
--------------	----------------------------------

---

**Description**

See [parenthesize](#).

---

r_can_find_tools	<i>Can R find tools?</i>
------------------	--------------------------

---

**Description**

See [r\\_can\\_find\\_tools](#).

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r_has_jpeg_capability	<i>Does R have a capability?</i>
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**Description**

See [r\\_has\\_jpeg\\_capability](#).

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set_cause	<i>Set a cause and return the input</i>
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**Description**

See [set\\_cause](#).

---

strip_attributes	<i>Strip all attributes from a variable</i>
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**Description**

See [strip\\_attributes](#).

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sys_get_locale	<i>Get or set the system locale</i>
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**Description**

See [sys\\_get\\_locale](#).

---

Truth	<i>Is the input TRUE/FALSE/NA?</i>
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**Description**

See [Truth](#).

---

use_first	<i>Only use the first element of a vector</i>
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**Description**

See [use\\_first](#).

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