

# HIVcDNAvantWout03

October 5, 2010

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hiv1raw

*T cell line infections with HIV-1 LAI (BRU)*

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## Description

The expression levels of approximately 4600 cellular RNA transcripts were assessed in CD4+ T cell lines at different times after infection with HIV-1BRU using DNA microarrays. There are two data sets, which are part of a dye-swap experiment with replicates, representing the Cy3 (green) absorption intensities for channel 1 (hiv1raw) and the Cy5 (red) absorption intensities for channel 2 (hiv2raw).

## Usage

data(hiv1raw)

## Format

This data represents a block within a microarray image with 12x32 spots. It is stored as a vector of length 450,000 representing a 450x1000 matrix (ordered by column) of intensities encoded for compact (16-bit TIFF) storage.

## Details

The intensities can be obtained from this data by first subtracting them from 65535, then squaring, then multiplying by a scale factor 4.71542407E-05. In other words, a number  $x$  in the hiv1 data set corresponds to intensity  $(256 * 256 - 1 - x)^2 * .0000471542407$ .

## Source

Dr. Angelique van't Wout, Department of Microbiology, University of Washington

The data corresponds to the first block of a 12 block array image ('001030\_08\_1.GEL') in the first data set ('2000095918 A') in the first experiment ('CEM LAI vs HI-LAI 24hr') of the following data archive: <http://expression.microslu.washington.edu/expression/vantwoutjvi2002.html>

## References

van't Wout AB, Lehrman GK, Mikheeva SA, O'Keefe GC, Katze MG, Bumgarner RE, Geiss GK and Mullins JI, Cellular gene expression upon human immunodeficiency virus type 1 infection of CD4(+)-T-cell lines, *J Virol.* 2003 Jan;77(2):1392-402.a

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`hiv2raw`*T cell line infections with HIV-1 LAI (BRU)*

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**Description**

The expression levels of approximately 4600 cellular RNA transcripts were assessed in CD4+ T cell lines at different times after infection with HIV-1BRU using DNA microarrays. There are two data sets, which are part of a dye-swap experiment with replicates, representing the Cy3 (green) absorption intensities for channel 1 (`hiv1raw`) and the Cy5 (red) absorption intensities for channel 2 (`hiv2raw`).

**Usage**

```
data(hiv2raw)
```

**Format**

This data represents a block within a microarray image with 12x32 spots. It is stored as a vector of length 450,000 representing a 450x1000 matrix (ordered by column) of intensities encoded for compact (16-bit TIFF) storage.

**Details**

The intensities can be obtained from this data by first subtracting them from 65535, then squaring, then multiplying by a scale factor 4.71542407E-05. In other words, a number  $x$  in the `hiv1` data set corresponds to intensity  $(256 * 256 - 1 - x)^2 * .0000471542407$ .

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