

Codebook for
mbita_schisto.csv / .rds

This file includes 3,663 observations and 12 variables.

Each observation corresponds to a measurement on a single child. The data are in long format by study year (year) and village (vid).

All of the IgG antibody responses to SEA and Sm25 are in units of median florescence intensity minus background (MFI-bg) and were measured in a multiplex bead assay on a BioPlex 200 Luminex machine at KEMRI. Note that there are 237 children with serology results but no Kato-Katz stool results.

For details about the study design and measurement methods, please refer to this related article:

Won KY, Kanyi HM, Mwende FM, Wiegand RE, Goodhew EB, Priest JW, et al. Multiplex Serologic Assessment of Schistosomiasis in Western Kenya: Antibody Responses in Preschool Aged Children as a Measure of Reduced Transmission. *Am J Trop Med Hyg.* 2017;96: 1460â€“1467. <https://www.ncbi.nlm.nih.gov/pubmed/28719280>

Below is a brief description of the variables in this file.

```
> str(mbita_schisto)
'data.frame':  3663 obs. of  12 variables:
 $ year   : num  2012 2012 2012 2012 2012 ...
 $ vid    : int  1 1 1 1 1 1 1 1 1 1 ...
 $ arm    : Factor w/ 2 levels "CWT","SBT": 1 1 1 1 1 1 1 1 1 1 ...
 $ pid    : chr  "1" "2" "3" "4" ...
 $ agey   : num  1.81 2.17 2.95 2.63 2.54 ...
 $ sex    : Factor w/ 2 levels "male","female": 1 2 2 2 1 1 1 2 1 2 ...
 $ sea    : num  3136 25605 28549 87 26537 ...
 $ sm25   : num  -2 1344 520 -4 1 ...
 $ sm_epg : int  12 12 0 36 24 132 0 48 132 0 ...
 $ sea_pos : num  1 1 1 0 1 1 1 1 1 1 ...
 $ sm25_pos: num  0 1 1 0 0 0 0 0 0 0 ...
 $ kk_pos : num  1 1 0 1 1 1 0 1 1 0 ...

$ year   : study year, equal to 2012, 2013, or 2014
$ vid    : village ID (1 to 30) for each of the study communities
$ arm    : study arm for the original randomized trial. CWT: community-wide treatment; SBT: school-based treatment
$ pid    : individual child ID 1 to 3,663
$ agey   : child age in years
$ sex    : child sex (male, female)
$ sea    : Luminex reponse in MFI-bg to S. mansoni soluble egg antigen (SEA)
$ sm25   : Luminex reponse in MFI-bg to S. mansoni Sm25 recombinant antigen
$ sm_epg : Kato-Katz dual slide S. mansoni eggs per gram of stool
$ sea_pos : seropositive by SEA. Cutoff determined by ROC analysis, equal to 965 MFI-bg; sens: sensitivity = 97.5%, specificity = 100%
$ sm25_pos: seropositive by SEA. Cutoff determined by ROC analysis, equal to 38 MFI-bg; sensitivity = 93.5%, specificity = 97.3%
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