Schief 546 (G003) BAMA Response Rate and Magnitude Testing Counts and Testing

Table 1: Two sided Wilcox tests at a .05 significance level for pairwise comparisons of response magnitudes (AUTC and delta AUTC) between G001, G002 and G003 for weeks 2, 8, 10 and 16 and antigens Lumazine Synthase, eOD-GT8 60mer, eOD-GT8.1, eOD-GT8 KO11 and eOD-GT8 CD4bs. No adjustments for multiple-testing were made in column: P-value. A false discovery rate (FDR) adjustment was made within pairwise comparisons by antigen in the column: FDR.

Antigen	Week	Comparison	Sample Sizes	P-value	FDR
Lumazine Synthase	2	G001 vs. G002	36 vs. 52	0.4805	0.5242
		G001 vs. G003	36 vs. 18	<0.0001	<0.0001
		G002 vs. G003	52 vs. 18	<0.0001	<0.0001
	8	G001 vs. G002	36 vs. 50	0.6538	0.6538
		G001 vs. G003	36 vs. 18	<0.0001	<0.0001
		G002 vs. G003	50 vs. 18	<0.0001	<0.0001
	10	G001 vs. G002	34 vs. 32	<0.0001	<0.0001
		G001 vs. G003	34 vs. 18	<0.0001	<0.0001
		G002 vs. G003	32 vs. 18	<0.0001	<0.0001
	16	G001 vs. G002	34 vs. 29	0.0016	0.0019
		G001 vs. G003	34 vs. 17	<0.0001	<0.0001
		G002 vs. G003	29 vs. 17	0.0002	0.0002
eOD-GT8 60mer	2	G001 vs. G002	35 vs. 51	<0.0001	<0.0001
		G001 vs. G003	35 vs. 18	<0.0001	<0.0001
		G002 vs. G003	51 vs. 18	<0.0001	<0.0001
	8	G001 vs. G002	35 vs. 50	<0.0001	<0.0001
		G001 vs. G003	35 vs. 18	<0.0001	<0.0001
		G002 vs. G003	50 vs. 18	<0.0001	<0.0001
	10	G001 vs. G002	33 vs. 32	<0.0001	<0.0001
		G001 vs. G003	33 vs. 18	<0.0001	<0.0001
		G002 vs. G003	32 vs. 18	0.0007	0.0008
	16	G001 vs. G002	33 vs. 29	<0.0001	<0.0001
		G001 vs. G003	33 vs. 17	0.5700	0.5700
		G002 vs. G003	29 vs. 17	<0.0001	<0.0001
eOD-GT8.1	2	G001 vs. G002	35 vs. 52	<0.0001	<0.0001
		G001 vs. G003	35 vs. 18	<0.0001	<0.0001
		G002 vs. G003	52 vs. 18	0.0202	0.0221
	8	G001 vs. G002	36 vs. 50	<0.0001	<0.0001
		G001 vs. G003	36 vs. 18	<0.0001	<0.0001
		G002 vs. G003	50 vs. 18	0.0017	0.0023
	10	G001 vs. G002	34 vs. 32	<0.0001	<0.0001
		G001 vs. G003	34 vs. 18	<0.0001	<0.0001
		G002 vs. G003	32 vs. 18	0.0102	0.0122
	16	G001 vs. G002	34 vs. 29	<0.0001	<0.0001
		G001 vs. G003	34 vs. 17	0.7144	0.7144
		G002 vs. G003	29 vs. 17	<0.0001	<0.0001
eOD-GT8 KO11	2	G001 vs. G002	36 vs. 52	<0.0001	<0.0001
		G001 vs. G003	36 vs. 18	<0.0001	<0.0001
		G002 vs. G003	52 vs. 18	0.0684	0.0820
	8	G001 vs. G002	36 vs. 50	<0.0001	<0.0001
		G001 vs. G003	36 vs. 18	<0.0001	<0.0001
		G002 vs. G003	50 vs. 18	0.1681	0.1833
	10	G001 vs. G002	34 vs. 32	<0.0001	<0.0001
		G001 vs. G003	34 vs. 18	<0.0001	<0.0001
		G002 vs. G003	32 vs. 18	0.0611	0.0815
	16	G001 vs. G002	33 vs. 29	<0.0001	<0.0001
		G001 vs. G003	33 vs. 17	0.5030	0.5030
		G002 vs. G003	29 vs. 17	<0.0001	<0.0001
eOD-GT8 CD4bs	2	G001 vs. G002	35 vs. 52	<0.0001	<0.0001
		G001 vs. G003	35 vs. 18	<0.0001	<0.0001
		G002 vs. G003	52 vs. 18	0.3069	0.3616
	8	G001 vs. G002	36 vs. 50	<0.0001	<0.0001
		G001 vs. G003	36 vs. 18	0.0193	0.0385
		G002 vs. G003	50 vs. 18	0.0007	0.0022
	10	G001 vs. G002	34 vs. 32	0.0011	0.0027
		G001 vs. G003	34 vs. 18	0.0280	0.0481
		G002 vs. G003	32 vs. 18	0.9283	0.9283
	16	G001 vs. G002	33 vs. 29	0.1636	0.2181
		G001 vs. G003	33 vs. 17	0.0893	0.1339
		G002 vs. G003	29 vs. 17	0.3314	0.3616

Table 2: Two sided Barnard tests at a .05 significance level for pairwise comparisons of response rates between G001, G002 and G003 for weeks 2, 8, 10 and 16 and antigens Lumazine Synthase, eOD-GT8 60mer, eOD-GT8.1, eOD-GT8 KO11 and eOD-GT8 CD4bs. No adjustments for multiple-testing were made in column: P-value. A false discovery rate (FDR) adjustment was made within pairwise comparisons by antigen in the column: FDR.

Antigen	Week	Comparison	Sample Sizes	P-value	FDR
Lumazine Synthase	2	G001 vs. G002	36 vs. 52	0.0018	0.0210
		G001 vs. G003	36 vs. 18	0.1225	0.4090
		G002 vs. G003	52 vs. 18	0.5804	0.8706
	8	G001 vs. G002	36 vs. 50	0.0045	0.0272
		G001 vs. G003	36 vs. 18	0.1704	0.4090
		G002 vs. G003	50 vs. 18	0.1639	0.4090
	10	G001 vs. G002	34 vs. 32	1.0000	1.0000
		G001 vs. G003	34 vs. 18	1.0000	1.0000
		G002 vs. G003	32 vs. 18	1.0000	1.0000
	16	G001 vs. G002	34 vs. 29	0.3527	0.7054
		G001 vs. G003	34 vs. 17	1.0000	1.0000
		G002 vs. G003	29 vs. 17	0.5703	0.8706
eOD-GT8 60mer	2	G001 vs. G002	35 vs. 51	1.0000	1.0000
		G001 vs. G003	35 vs. 18	1.0000	1.0000
		G002 vs. G003	51 vs. 18	1.0000	1.0000
	8	G001 vs. G002	35 vs. 50	1.0000	1.0000
		G001 vs. G003	35 vs. 18	1.0000	1.0000
		G002 vs. G003	50 vs. 18	1.0000	1.0000
	10	G001 vs. G002	33 vs. 32	1.0000	1.0000
		G001 vs. G003	33 vs. 18	1.0000	1.0000
		G002 vs. G003	32 vs. 18	1.0000	1.0000
	16	G001 vs. G002	33 vs. 29	1.0000	1.0000
		G001 vs. G003	33 vs. 17	1.0000	1.0000
		G002 vs. G003	29 vs. 17	1.0000	1.0000
eOD-GT8.1	2	G001 vs. G002	35 vs. 52	1.0000	1.0000
		G001 vs. G003	35 vs. 18	1.0000	1.0000
		G002 vs. G003	52 vs. 18	1.0000	1.0000
	8	G001 vs. G002	36 vs. 50	1.0000	1.0000
		G001 vs. G003	36 vs. 18	1.0000	1.0000
		G002 vs. G003	50 vs. 18	1.0000	1.0000
	10	G001 vs. G002	34 vs. 32	1.0000	1.0000
		G001 vs. G003	34 vs. 18	1.0000	1.0000
		G002 vs. G003	32 vs. 18	1.0000	1.0000
	16	G001 vs. G002	34 vs. 29	1.0000	1.0000
		G001 vs. G003	34 vs. 17	1.0000	1.0000
		G002 vs. G003	29 vs. 17	1.0000	1.0000
eOD-GT8 KO11	2	G001 vs. G002	36 vs. 52	0.2583	1.0000
		G001 vs. G003	36 vs. 18	0.5946	1.0000
		G002 vs. G003	52 vs. 18	1.0000	1.0000
	8	G001 vs. G002	36 vs. 50	1.0000	1.0000
		G001 vs. G003	36 vs. 18	1.0000	1.0000
		G002 vs. G003	50 vs. 18	1.0000	1.0000
	10	G001 vs. G002	34 vs. 32	1.0000	1.0000
		G001 vs. G003	34 vs. 18	1.0000	1.0000
		G002 vs. G003	32 vs. 18	1.0000	1.0000
	16	G001 vs. G002	33 vs. 29	1.0000	1.0000
		G001 vs. G003	33 vs. 17	1.0000	1.0000
		G002 vs. G003	29 vs. 17	1.0000	1.0000
eOD-GT8 CD4bs	2	G001 vs. G002	35 vs. 52	1.0000	1.0000
		G001 vs. G003	35 vs. 18	1.0000	1.0000
		G002 vs. G003	52 vs. 18	1.0000	1.0000
	8	G001 vs. G002	36 vs. 50	1.0000	1.0000
		G001 vs. G003	36 vs. 18	1.0000	1.0000
		G002 vs. G003	50 vs. 18	1.0000	1.0000
	10	G001 vs. G002	34 vs. 32	0.5139	1.0000
		G001 vs. G003	34 vs. 18	0.5680	1.0000
		G002 vs. G003	32 vs. 18	1.0000	1.0000
	16	G001 vs. G002	33 vs. 29	0.5149	1.0000
		G001 vs. G003	33 vs. 17	0.5944	1.0000
		G002 vs. G003	29 vs. 17	1.0000	1.0000

Table 3: Two sided Wilcox tests at a .05 significance level for pairwise comparisons of response magnitudes between G001 and G003 with G002 were made. Comparisons were made for weeks 2, 8, 10 and 16 and antigens Lumazine Synthase, eOD-GT8 60mer, eOD-GT8.1, eOD-GT8 KO11 and eOD-GT8 CD4bs. No adjustments for multiple-testing were made in column: P-value. A false discovery rate (FDR) adjustment was made within pairwise comparisons by antigen in the column: FDR.

Antigen	Week	Comparison	Sample Sizes	P-value	FDR
Lumazine Synthase	2	G001 vs. G002	36 vs. 52	0.4805	0.5492
		G002 vs. G003	52 vs. 18	<0.0001	<0.0001
	8	G001 vs. G002	36 vs. 50	0.6538	0.6538
		G002 vs. G003	50 vs. 18	<0.0001	<0.0001
	10	G001 vs. G002	34 vs. 32	<0.0001	<0.0001
		G002 vs. G003	32 vs. 18	<0.0001	<0.0001
	16	G001 vs. G002	34 vs. 29	0.0016	0.0021
		G002 vs. G003	29 vs. 17	0.0002	0.0003
eOD-GT8 60mer	2	G001 vs. G002	35 vs. 51	<0.0001	<0.0001
		G002 vs. G003	51 vs. 18	<0.0001	<0.0001
	8	G001 vs. G002	35 vs. 50	<0.0001	<0.0001
		G002 vs. G003	50 vs. 18	<0.0001	<0.0001
	10	G001 vs. G002	33 vs. 32	<0.0001	<0.0001
		G002 vs. G003	32 vs. 18	0.0007	0.0007
	16	G001 vs. G002	33 vs. 29	<0.0001	<0.0001
		G002 vs. G003	29 vs. 17	<0.0001	<0.0001
eOD-GT8.1	2	G001 vs. G002	35 vs. 52	<0.0001	<0.0001
		G002 vs. G003	52 vs. 18	0.0202	0.0202
	8	G001 vs. G002	36 vs. 50	<0.0001	<0.0001
		G002 vs. G003	50 vs. 18	0.0017	0.0023
	10	G001 vs. G002	34 vs. 32	<0.0001	<0.0001
		G002 vs. G003	32 vs. 18	0.0102	0.0117
	16	G001 vs. G002	34 vs. 29	<0.0001	<0.0001
		G002 vs. G003	29 vs. 17	<0.0001	<0.0001
eOD-GT8 KO11	2	G001 vs. G002	36 vs. 52	<0.0001	<0.0001
		G002 vs. G003	52 vs. 18	0.0684	0.0781
	8	G001 vs. G002	36 vs. 50	<0.0001	<0.0001
		G002 vs. G003	50 vs. 18	0.1681	0.1681
	10	G001 vs. G002	34 vs. 32	<0.0001	<0.0001
		G002 vs. G003	32 vs. 18	0.0611	0.0781
	16	G001 vs. G002	33 vs. 29	<0.0001	<0.0001
		G002 vs. G003	29 vs. 17	<0.0001	<0.0001
eOD-GT8 CD4bs	2	G001 vs. G002	35 vs. 52	<0.0001	<0.0001
		G002 vs. G003	52 vs. 18	0.3069	0.3788
	8	G001 vs. G002	36 vs. 50	<0.0001	<0.0001
		G002 vs. G003	50 vs. 18	0.0007	0.0019
	10	G001 vs. G002	34 vs. 32	0.0011	0.0022
		G002 vs. G003	32 vs. 18	0.9283	0.9283
	16	G001 vs. G002	33 vs. 29	0.1636	0.2618
		G002 vs. G003	29 vs. 17	0.3314	0.3788

Table 4: Two sided Barnard tests at a .05 significance level for pairwise comparisons of response rates between G001 and G003 with G002 were made. Comparisons were made for weeks 2, 8, 10 and 16 and antigens Lumazine Synthase, eOD-GT8 60mer, eOD-GT8.1, eOD-GT8 KO11 and eOD-GT8 CD4bs. No adjustments for multiple-testing were made in column: P-value. A false discovery rate (FDR) adjustment was made within pairwise comparisons by antigen in the column: FDR.

Antigen	Week	Comparison	Sample Sizes	P-value	FDR
Lumazine Synthase	2	G001 vs. G002	36 vs. 52	0.0018	0.0140
		G002 vs. G003	52 vs. 18	0.5804	0.7739
	8	G001 vs. G002	36 vs. 50	0.0045	0.0181
		G002 vs. G003	50 vs. 18	0.1639	0.4370
	10	G001 vs. G002	34 vs. 32	1.0000	1.0000
		G002 vs. G003	32 vs. 18	1.0000	1.0000
	16	G001 vs. G002	34 vs. 29	0.3527	0.7054
		G002 vs. G003	29 vs. 17	0.5703	0.7739
eOD-GT8 60mer	2	G001 vs. G002	35 vs. 51	1.0000	1.0000
		G002 vs. G003	51 vs. 18	1.0000	1.0000
	8	G001 vs. G002	35 vs. 50	1.0000	1.0000
		G002 vs. G003	50 vs. 18	1.0000	1.0000
	10	G001 vs. G002	33 vs. 32	1.0000	1.0000
		G002 vs. G003	32 vs. 18	1.0000	1.0000
	16	G001 vs. G002	33 vs. 29	1.0000	1.0000
		G002 vs. G003	29 vs. 17	1.0000	1.0000
eOD-GT8.1	2	G001 vs. G002	35 vs. 52	1.0000	1.0000
		G002 vs. G003	52 vs. 18	1.0000	1.0000
	8	G001 vs. G002	36 vs. 50	1.0000	1.0000
		G002 vs. G003	50 vs. 18	1.0000	1.0000
	10	G001 vs. G002	34 vs. 32	1.0000	1.0000
		G002 vs. G003	32 vs. 18	1.0000	1.0000
	16	G001 vs. G002	34 vs. 29	1.0000	1.0000
		G002 vs. G003	29 vs. 17	1.0000	1.0000
eOD-GT8 KO11	2	G001 vs. G002	36 vs. 52	0.2583	1.0000
		G002 vs. G003	52 vs. 18	1.0000	1.0000
	8	G001 vs. G002	36 vs. 50	1.0000	1.0000
		G002 vs. G003	50 vs. 18	1.0000	1.0000
	10	G001 vs. G002	34 vs. 32	1.0000	1.0000
		G002 vs. G003	32 vs. 18	1.0000	1.0000
	16	G001 vs. G002	33 vs. 29	1.0000	1.0000
		G002 vs. G003	29 vs. 17	1.0000	1.0000
eOD-GT8 CD4bs	2	G001 vs. G002	35 vs. 52	1.0000	1.0000
		G002 vs. G003	52 vs. 18	1.0000	1.0000
	8	G001 vs. G002	36 vs. 50	1.0000	1.0000
		G002 vs. G003	50 vs. 18	1.0000	1.0000
	10	G001 vs. G002	34 vs. 32	0.5139	1.0000
		G002 vs. G003	32 vs. 18	1.0000	1.0000
	16	G001 vs. G002	33 vs. 29	0.5149	1.0000
		G002 vs. G003	29 vs. 17	1.0000	1.0000

Table 5: Study level comparison table for positivity thresholds for G001, G002, and G003. Note the threshold for Lumazine Synthase for G002 and G003 reflects a change in the positivity criteria. The response call for this antigen was made at the first dilution for which baseline net MFI was < 6500.

Antigen	G001	G002	G003
Lumazine Synthase	26915	100	100
eOD-GT8 60mer	1752	1950	5776
eOD-GT8.1	100	185	163
eOD-GT8 KO11	100	100	123

Reproducibility Software Information

Table 6: Reproducibility software session information

name	value
version	R version 4.3.1 (2023-06-16 ucrt)
os	Windows 10 x64 (build 19045)
system	x86_64, mingw32
ui	RTerm
language	(EN)
collate	English_United States.utf8
ctype	English_United States.utf8
tz	America/Los_Angeles
date	2024-12-21
pandoc	3.2 @ C:/Program Files/RStudio/resources/app/bin/quarto/bin/tools/ (via rmarkdown)
repo	https://github.com/FredHutch/Schief546Analysis.git
file name	Schief546-G003_BAMA_Visual_Slides_Aug2024.Rmd
location	BAMA/Aug2024_visuals_manuscript
user	glemire

Table 7: Reproducibility software package version information

package	version	data.version	date	source
conflicted	1.2.0		2023-02-01	CRAN (R 4.3.3)
dplyr	1.1.4		2023-11-17	CRAN (R 4.3.3)
Feinberg725	6.0	0.1.92	2024-01-08	git2r (N:/cavd/Studies/cvd725/pdata/Feinberg725.git@8813f8b
forcats	1.0.0		2023-01-29	CRAN (R 4.3.1)
ggbeeswarm	0.7.2		2023-04-29	CRAN (R 4.3.1)
ggplot2	3.5.1		2024-04-23	CRAN (R 4.3.3)
kableExtra	1.3.4.9000		2023-10-18	Github (kupietz/kableExtra@3bf9b21a769c9e6c21c955689bf5f81
knitr	1.49		2024-11-08	CRAN (R 4.3.3)
lubridate	1.9.2		2023-02-10	CRAN (R 4.3.1)
patchwork	1.2.0.9000		2024-07-26	Github (thomasp85/patchwork@55d054f41223c8ac27c85b236f38
purrr	1.0.2		2023-08-10	CRAN (R 4.3.1)
readr	2.1.5		2024-01-10	CRAN (R 4.3.3)
rmarkdown	2.29		2024-11-04	CRAN (R 4.3.3)
rprojroot	2.0.4		2023-11-05	CRAN (R 4.3.3)
Schief546	1.0	0.1.2	2024-08-07	git2r (N:/cavd/Studies/cvd546/pdata/Schief546.git@5a6c3de86
Schief856	1.0	0.1.31	2024-05-08	git2r (N:/cavd/Studies/cvd856/pdata/Schief856.git@72eb02375
stringr	1.5.1		2023-11-14	CRAN (R 4.3.3)
testthat	3.2.1.1		2024-04-14	CRAN (R 4.3.3)
tibble	3.2.1		2023-03-20	CRAN (R 4.3.1)
tidyr	1.3.1		2024-01-24	CRAN (R 4.3.3)
tidyverse	2.0.0		2023-02-22	CRAN (R 4.3.3)
VISCfunctions	1.2.2		2024-06-13	Github (FredHutch/VISCfunctions@28be2826df1c09cf2cac919ae
VISCtemplates	1.3.2		2024-08-20	Github (FredHutch/VISCtemplates@c39a74dab2dbb44991950d5