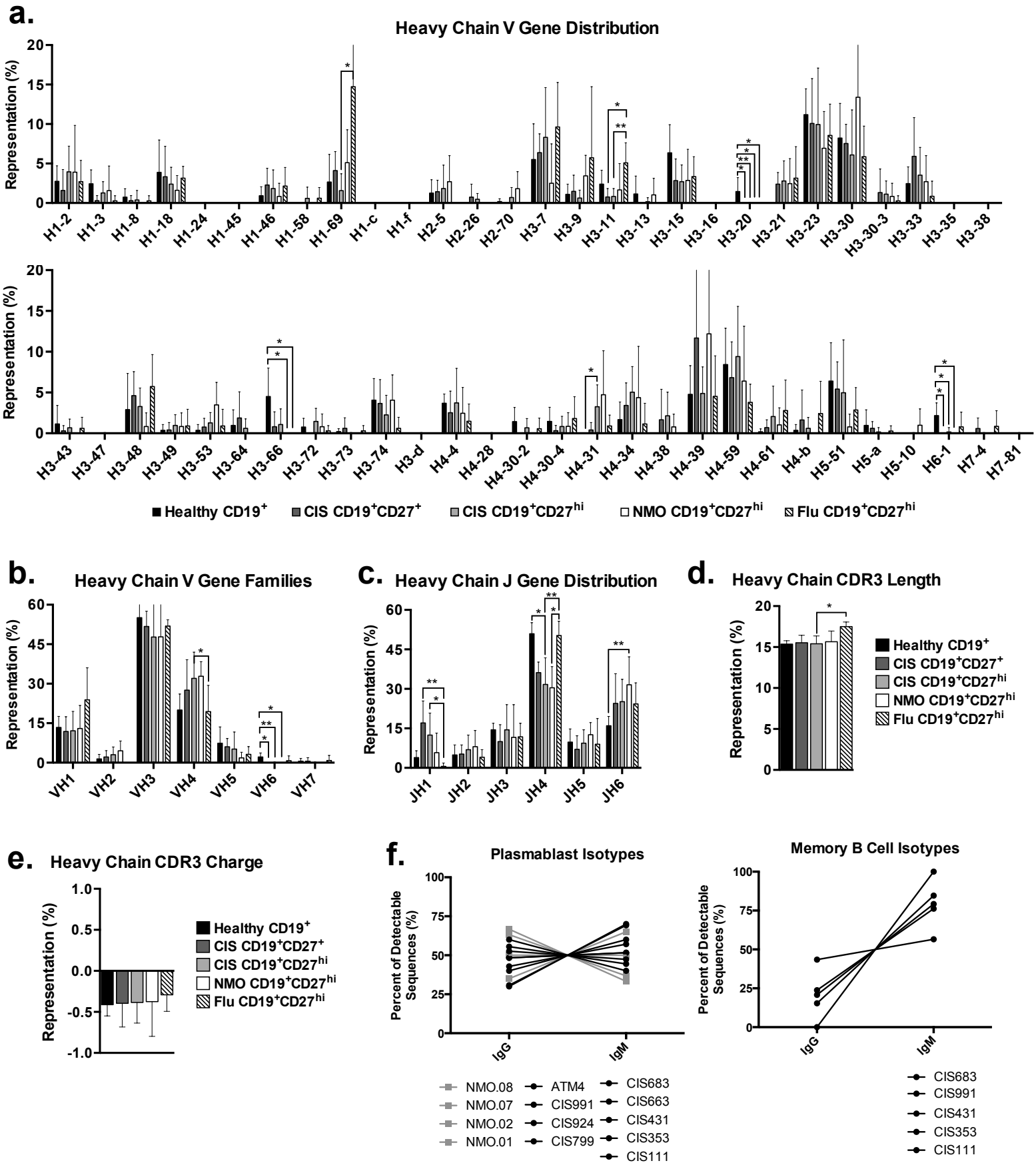
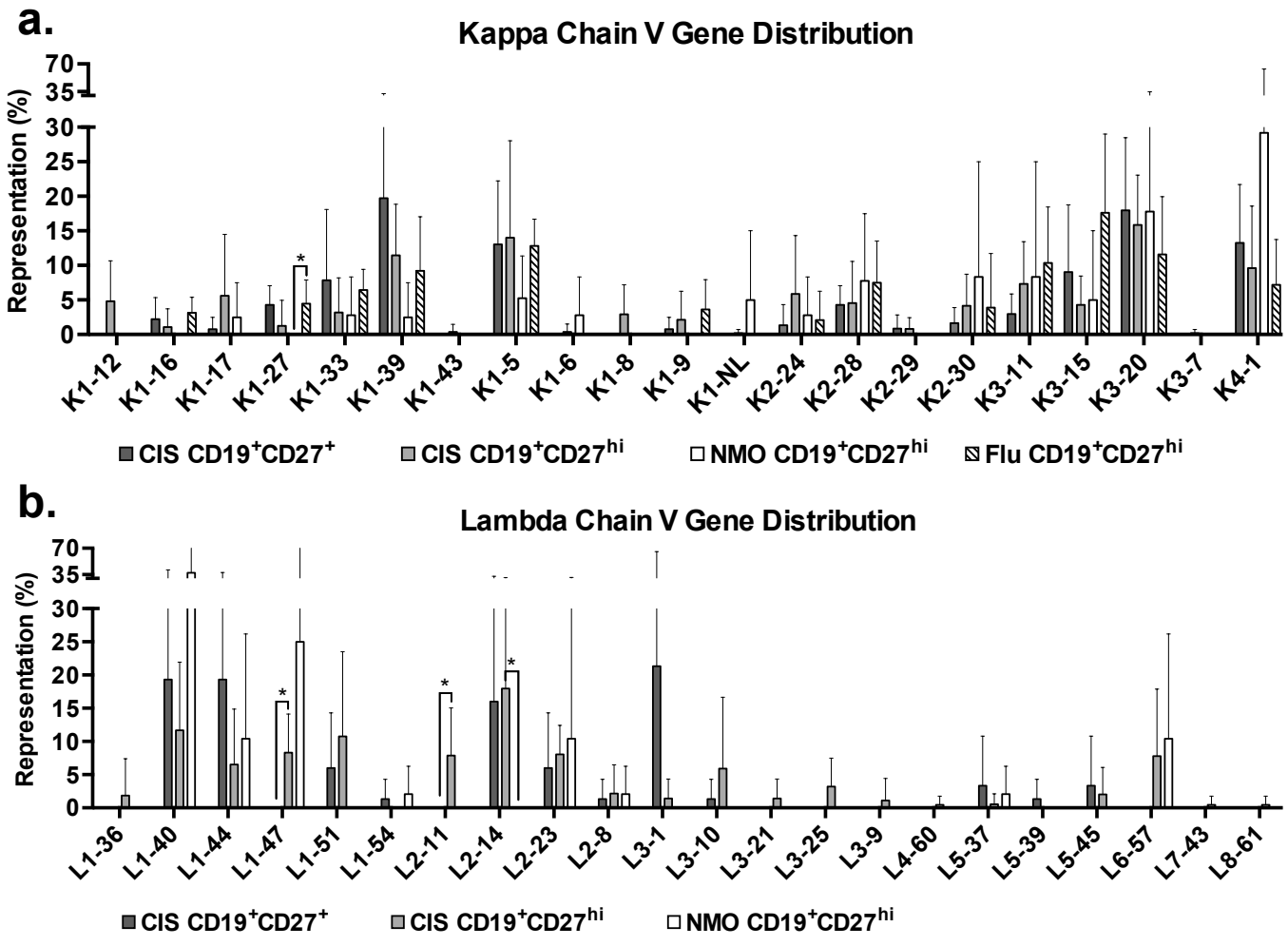
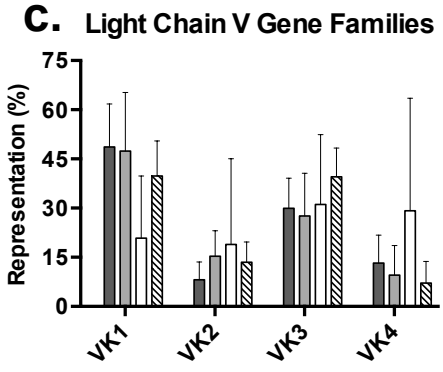
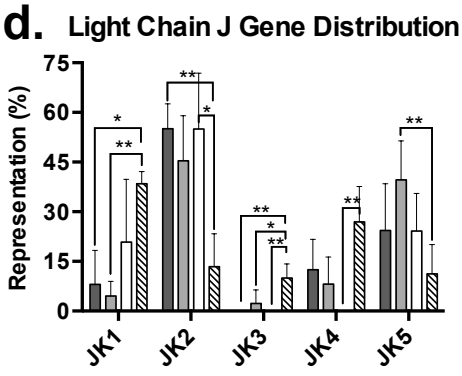
Supplemental Figure 1: Detailed heavy chain plasmablast genetics

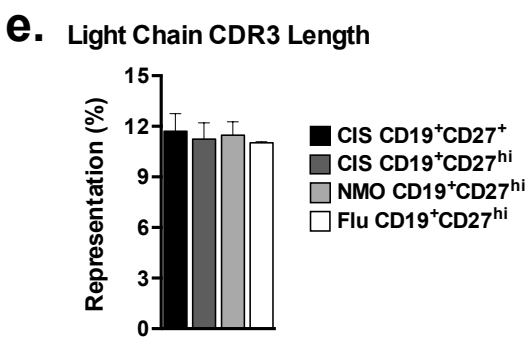


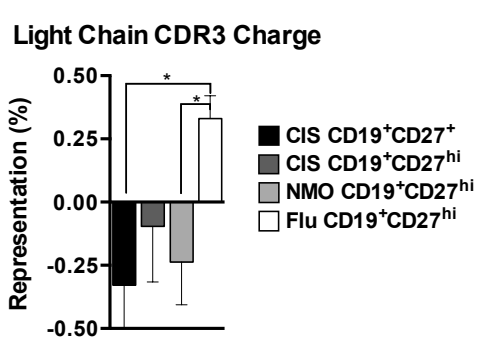
Supplemental Figure 2: Detailed heavy chain plasmablast genetics



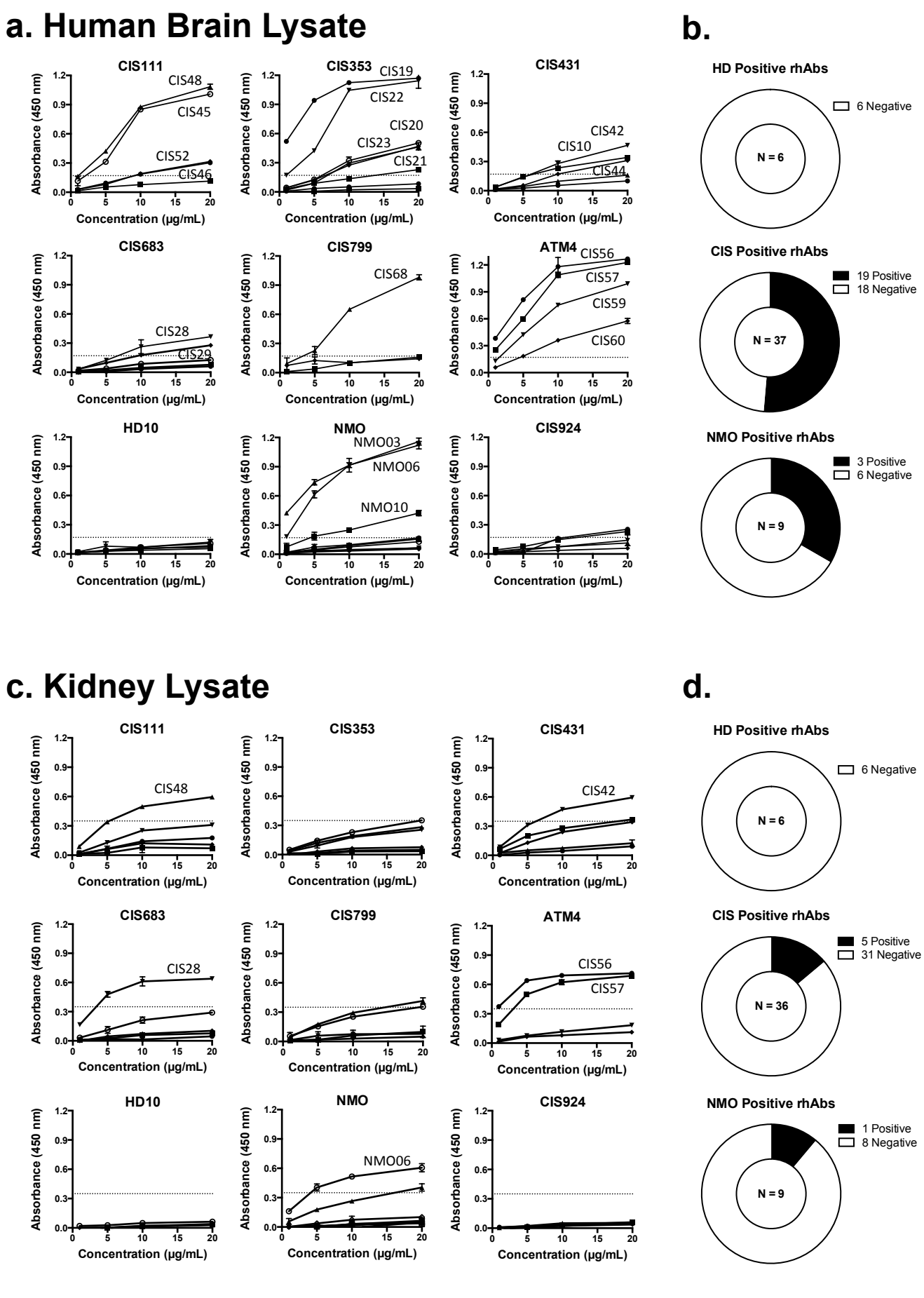




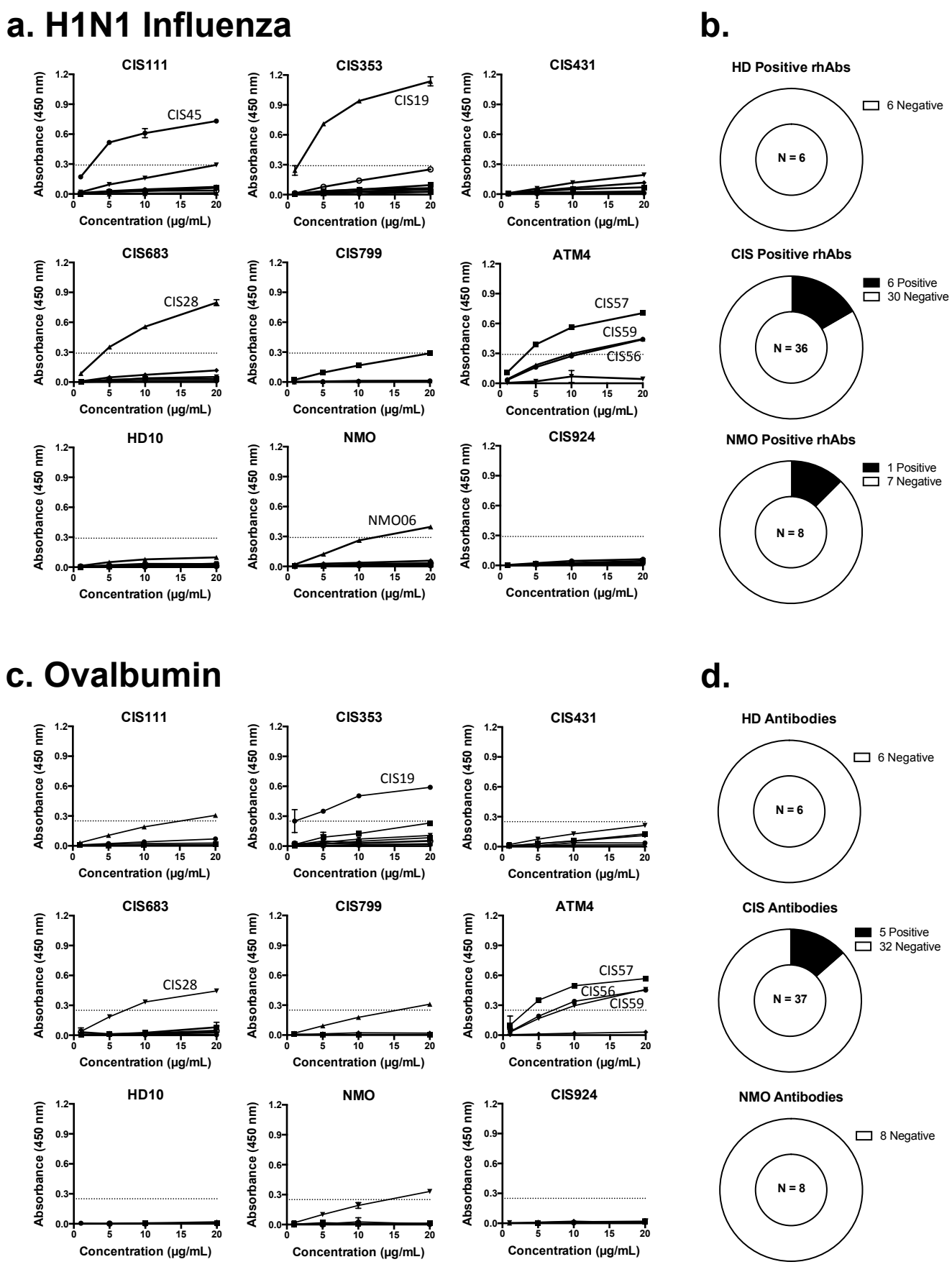




Supplemental Figure 3: Other tissue lysate ELISAs

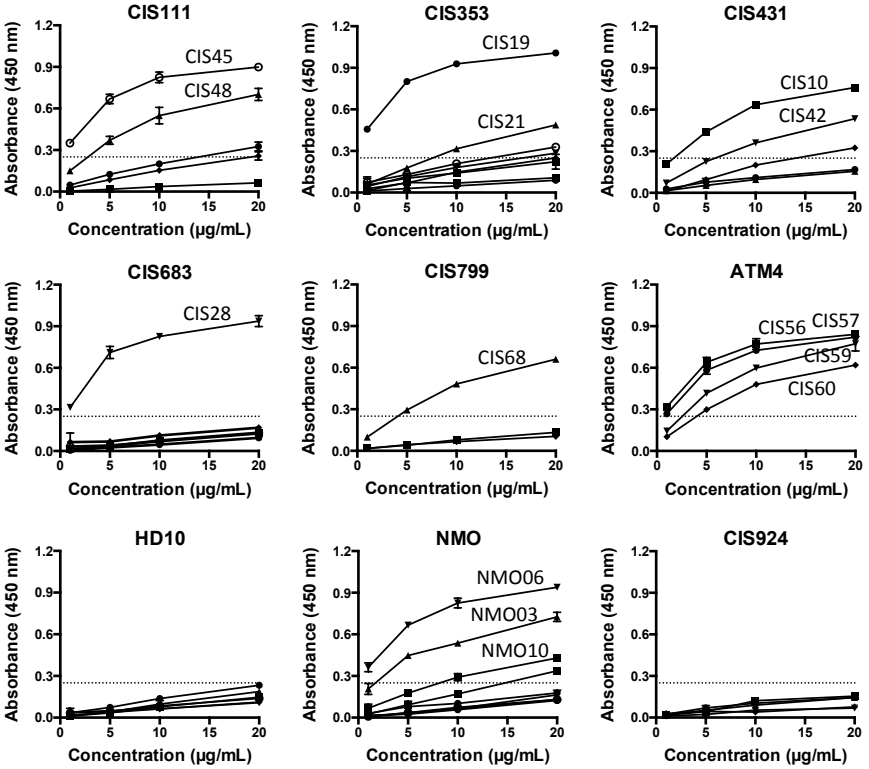


Supplemental Figure 4: Foreign antigen and irrelevant antigen ELISAs

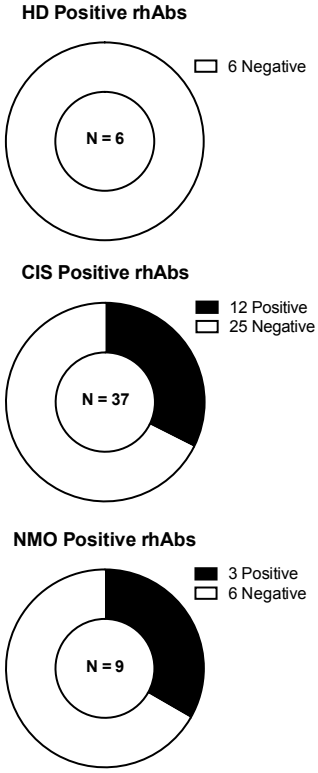


Supplemental Figure 5: Neuroblastoma Lysate ELISAs

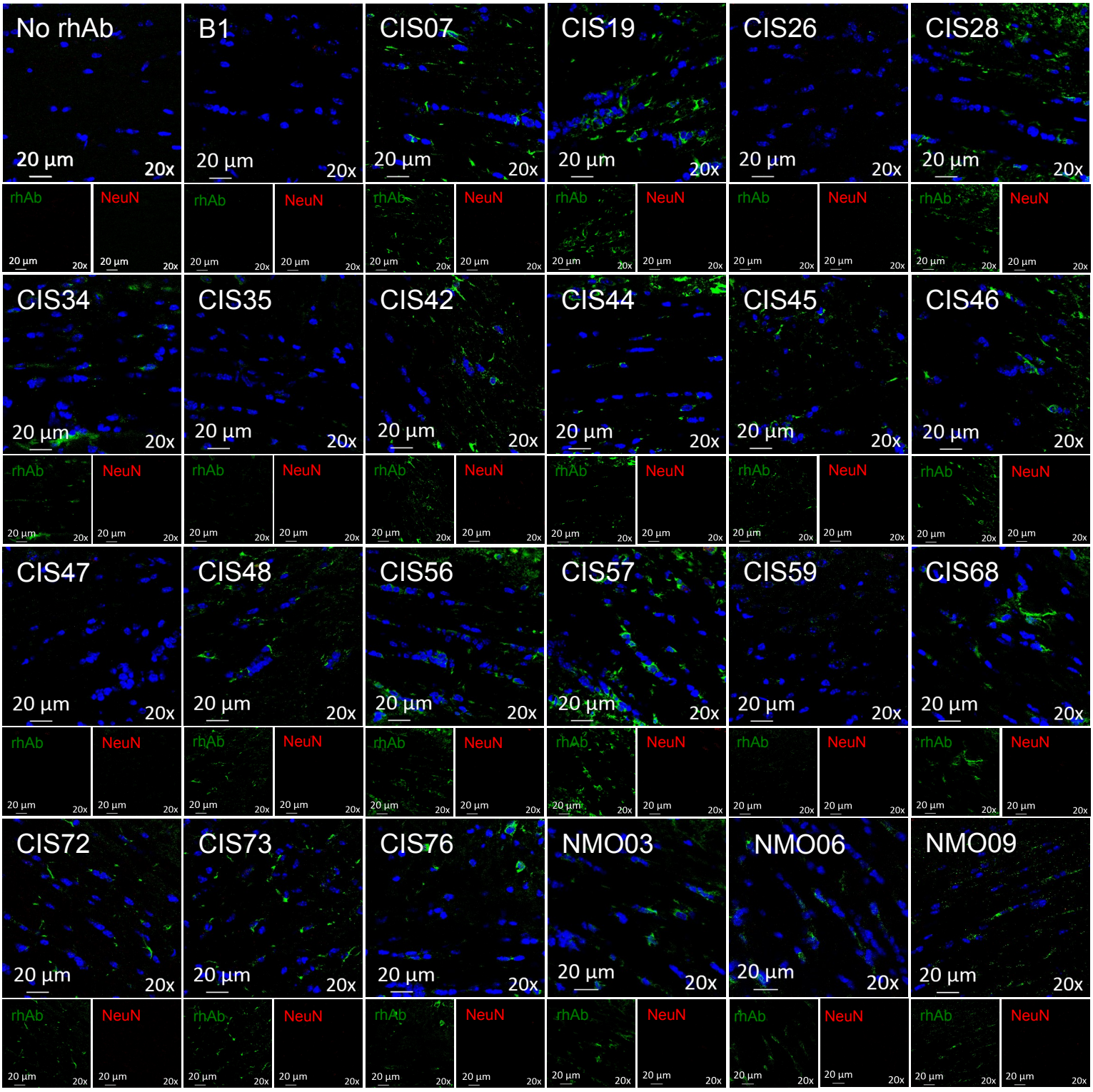
a. SH-Sy5y Lysate



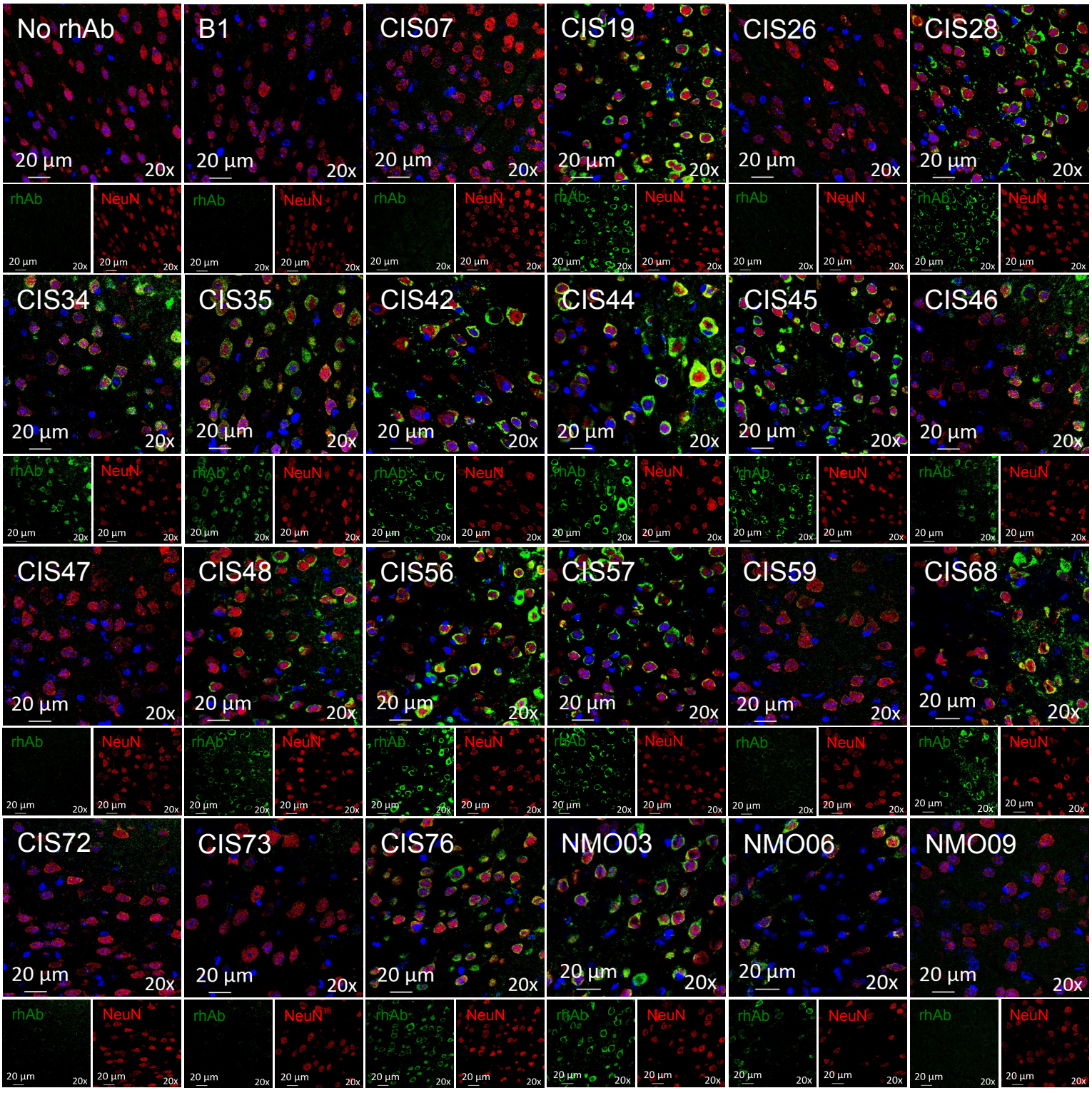
b.



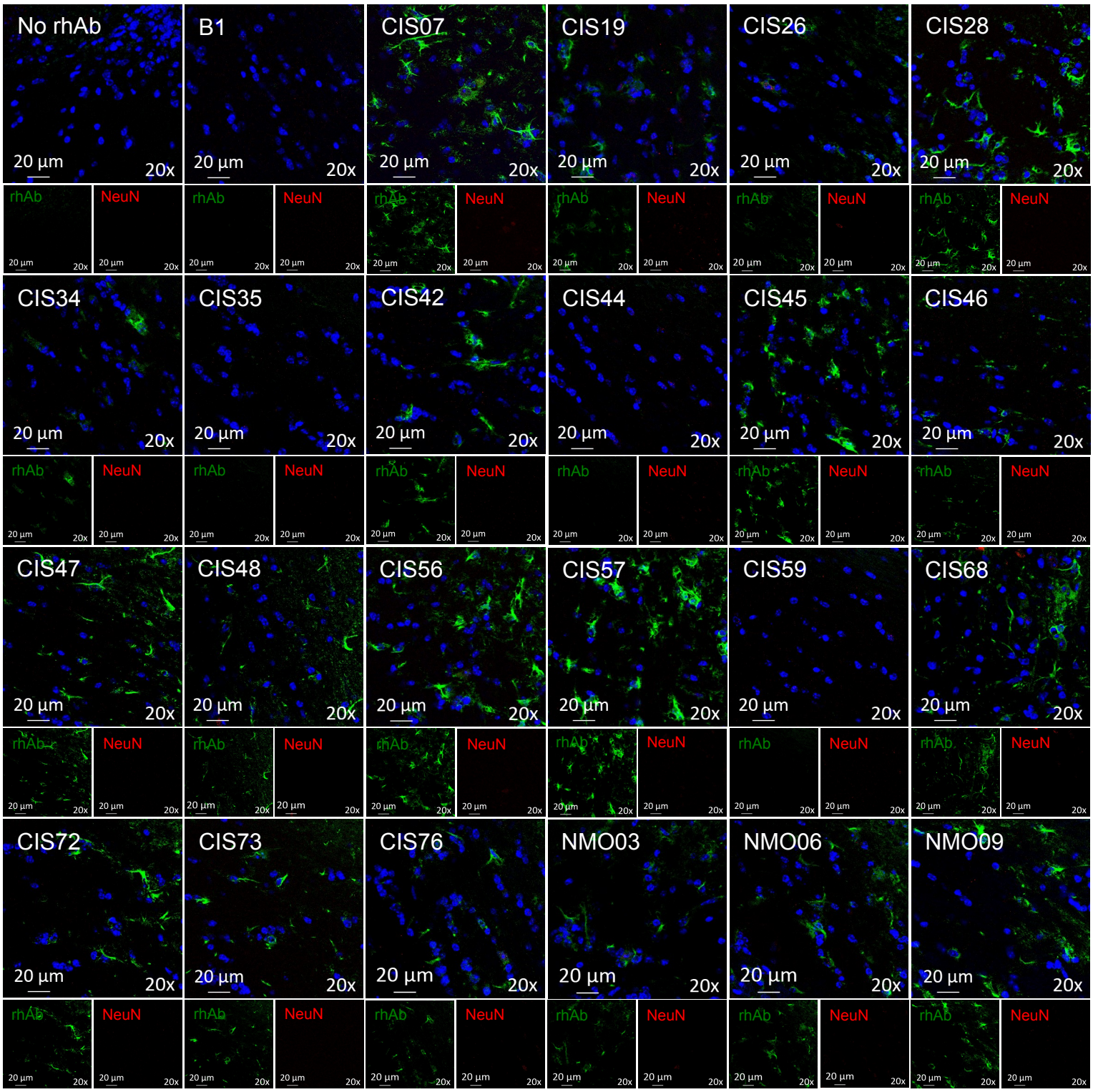
Supplemental Figure 6: Plasmablast rhAbs on stroke corpus callosum



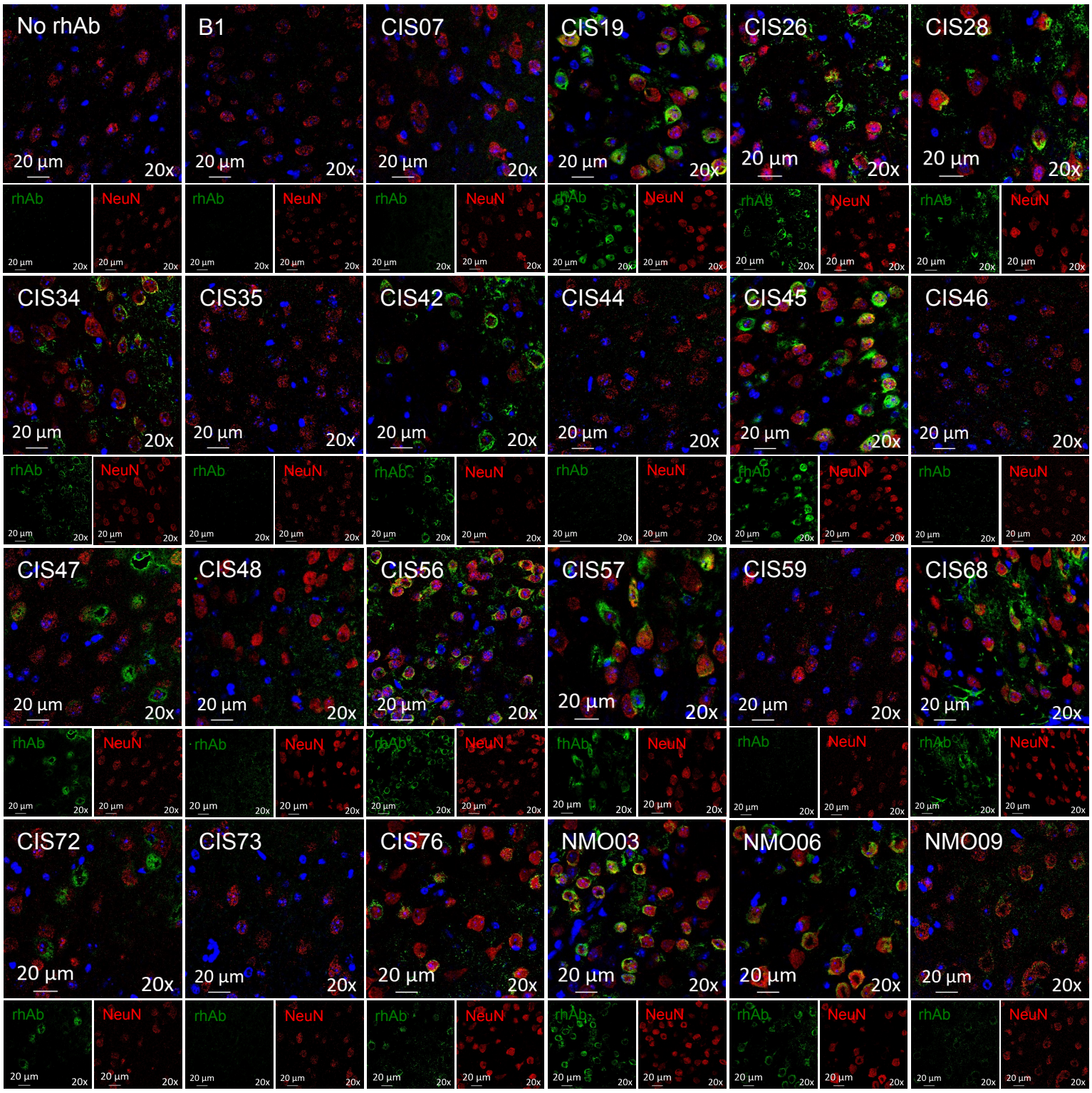
Supplemental Figure 7: Plasmablast rhAbs on stroke cortex



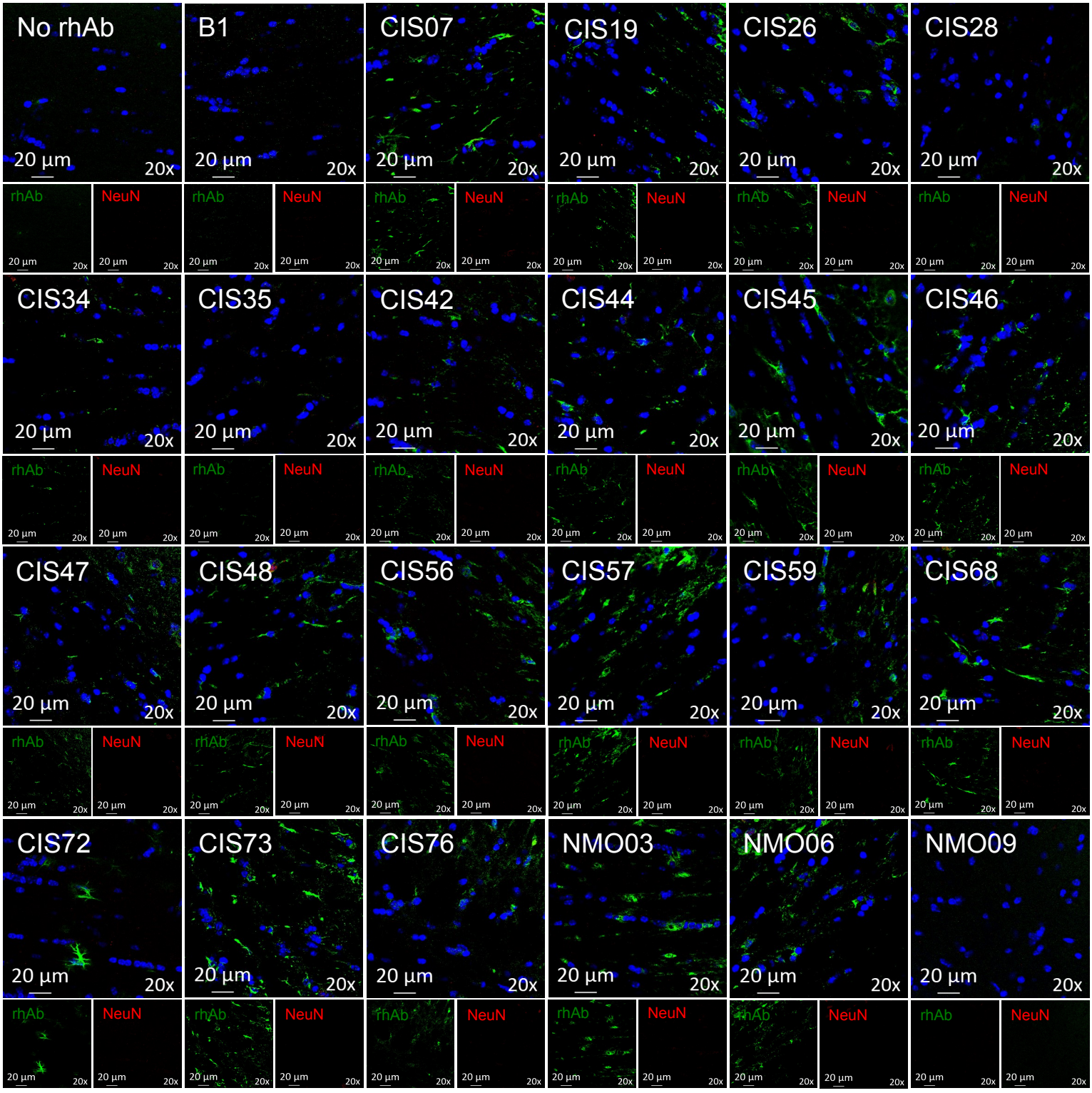
Supplemental Figure 8: Plasmablast rhAbs on EAE corpus callosum



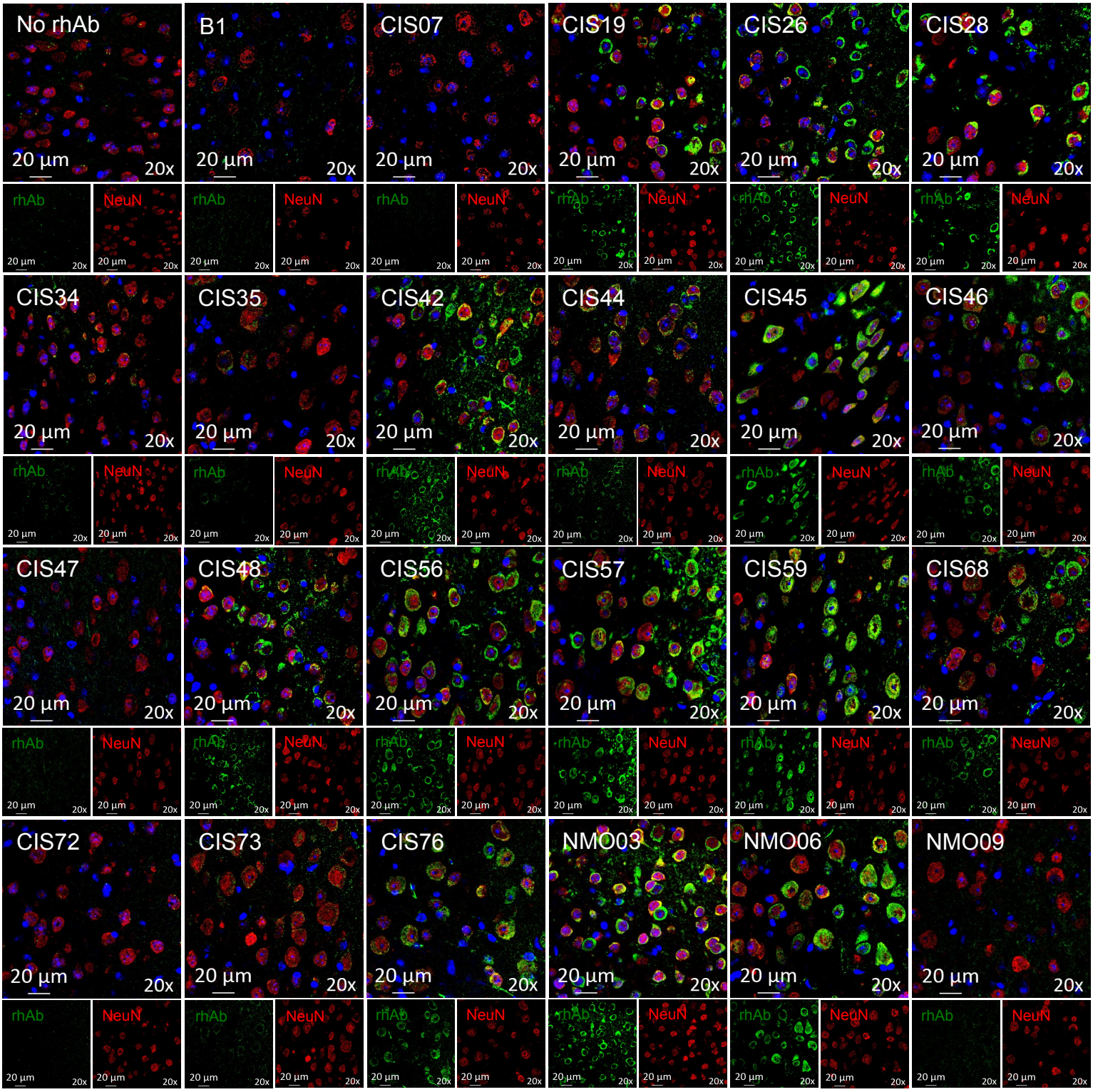
Supplemental Figure 9: Plasmablast rhAbs on EAE cortex



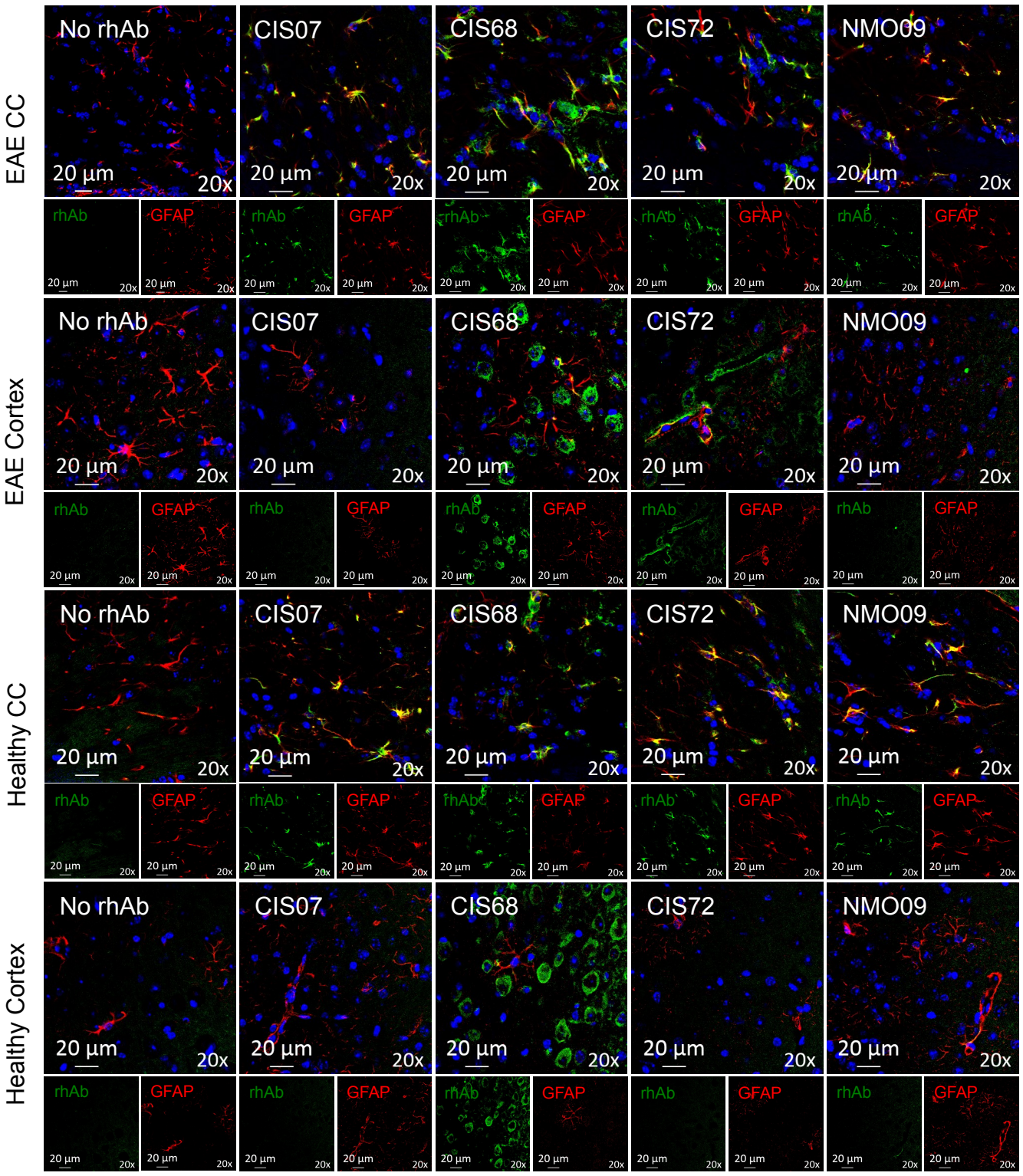
Supplemental Figure 10: Plasmablast rhAbs on healthy corpus callosum



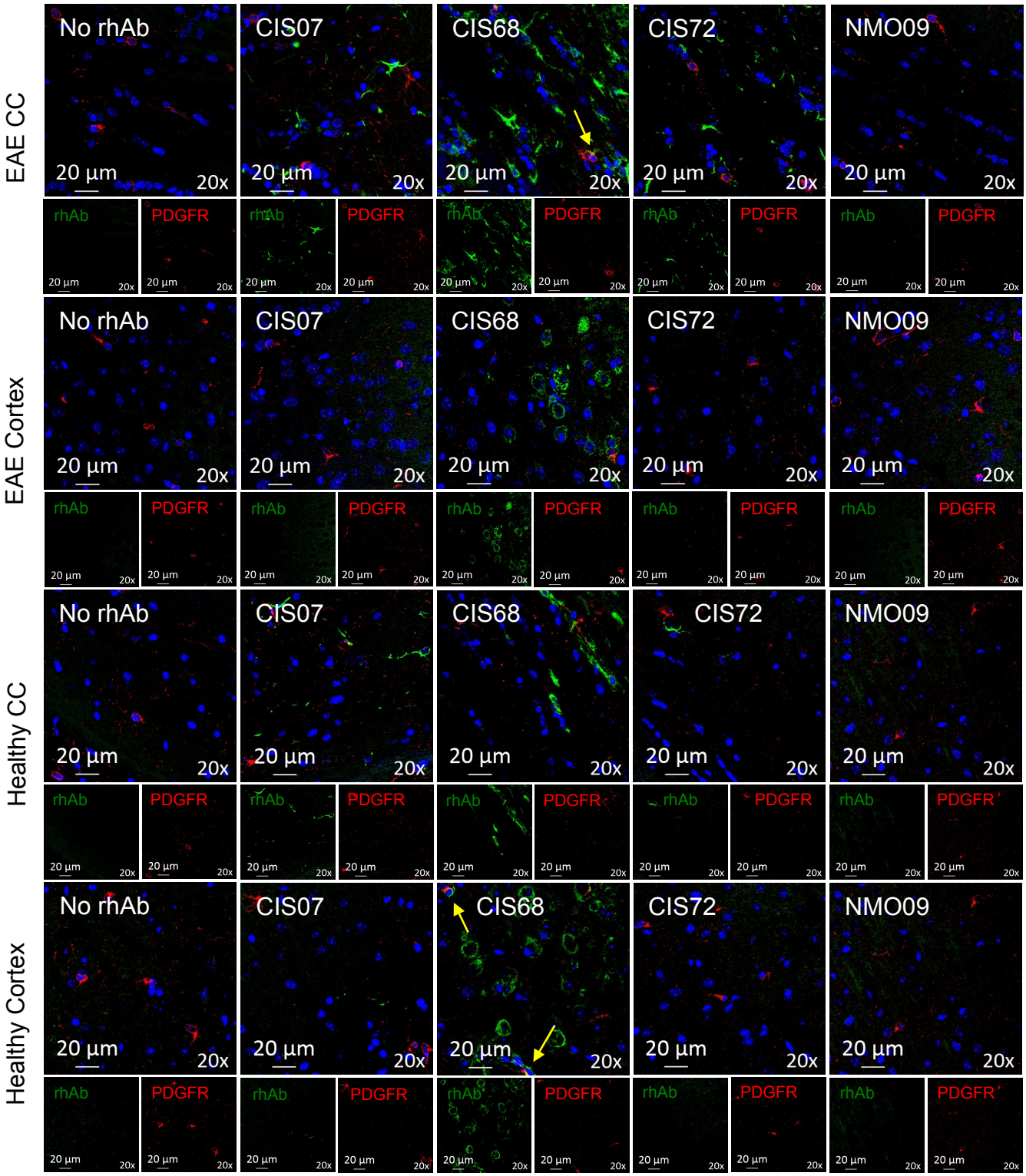
Supplemental Figure 11: Plasmablast rhAbs on healthy cortex



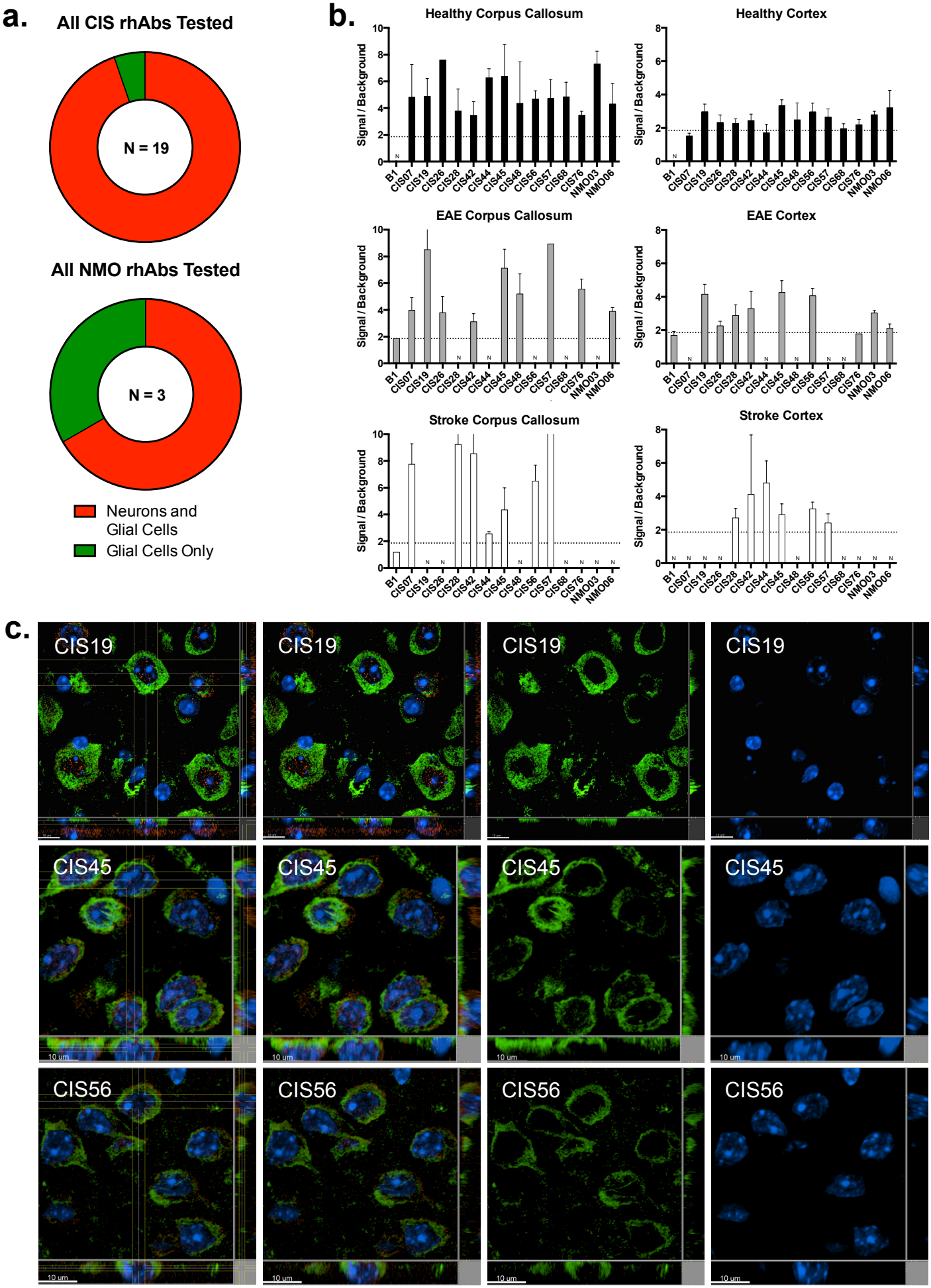
Supplemental Figure 12: Plasmablast rhAbs with astrocyte marker



Supplemental Figure 13: Plasmablast rhAbs with oligodendrocyte marker

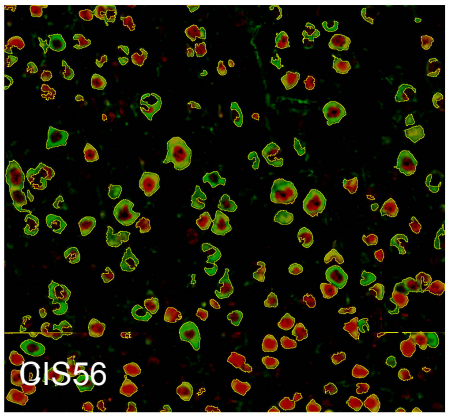


Supplemental Figure 14: Plasmablast rhAbs binding evaluation by histology

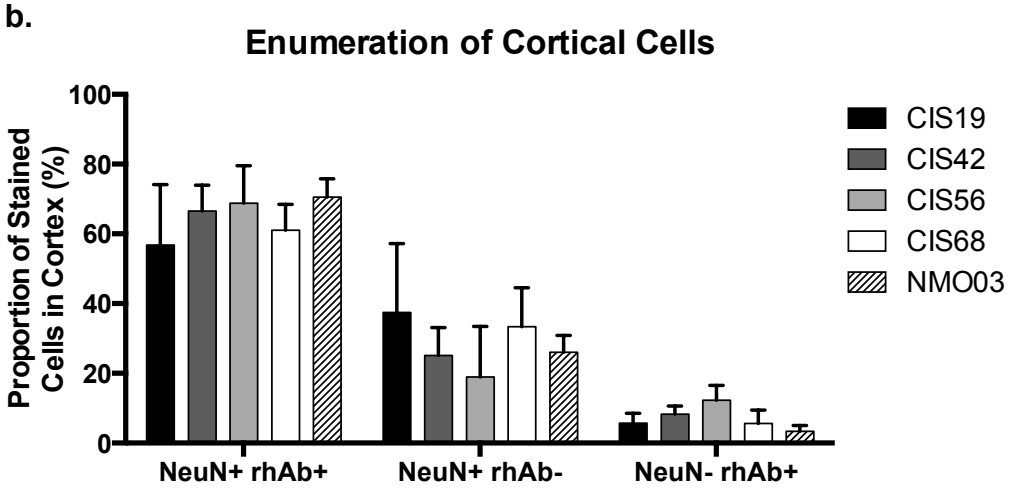


Supplemental Figure 15: Enumeration of positively stained cells in the cortex

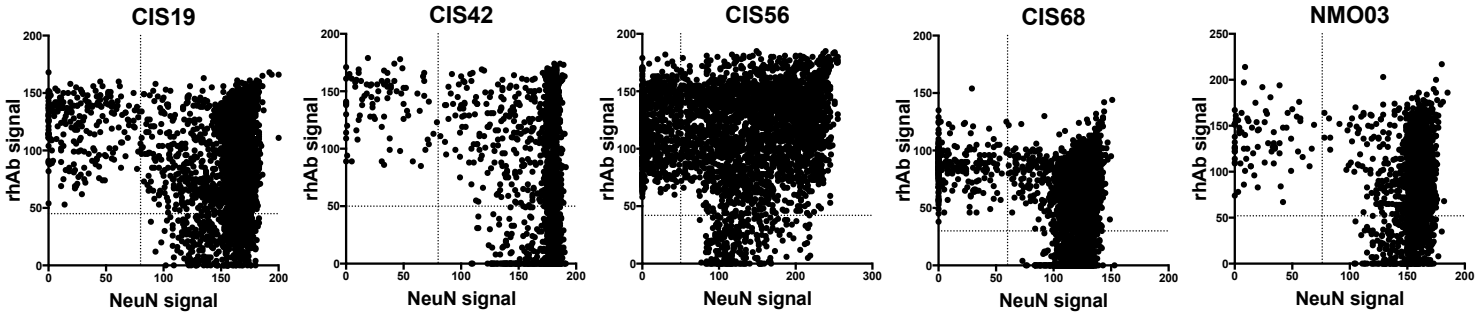
a.



b.



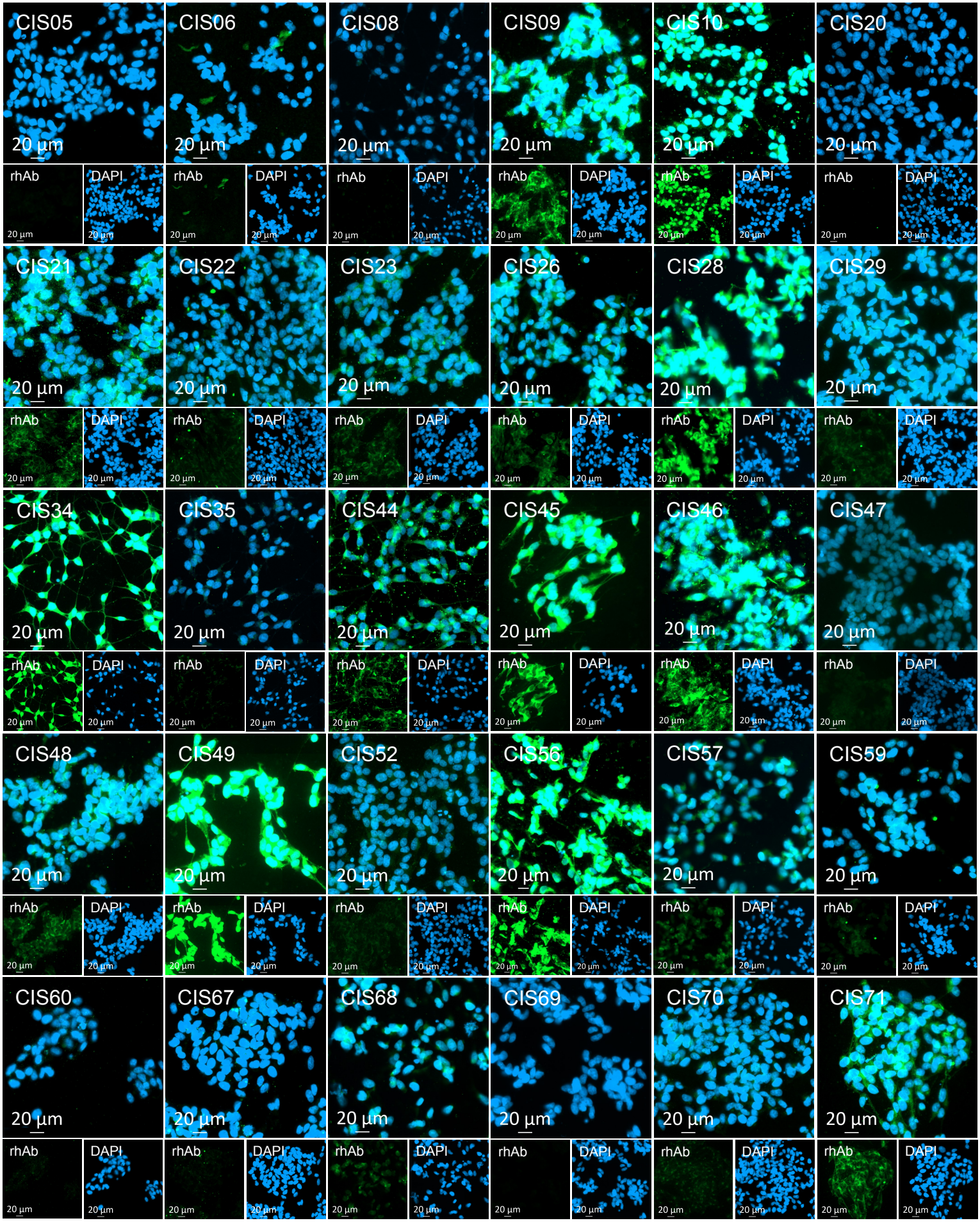
c.



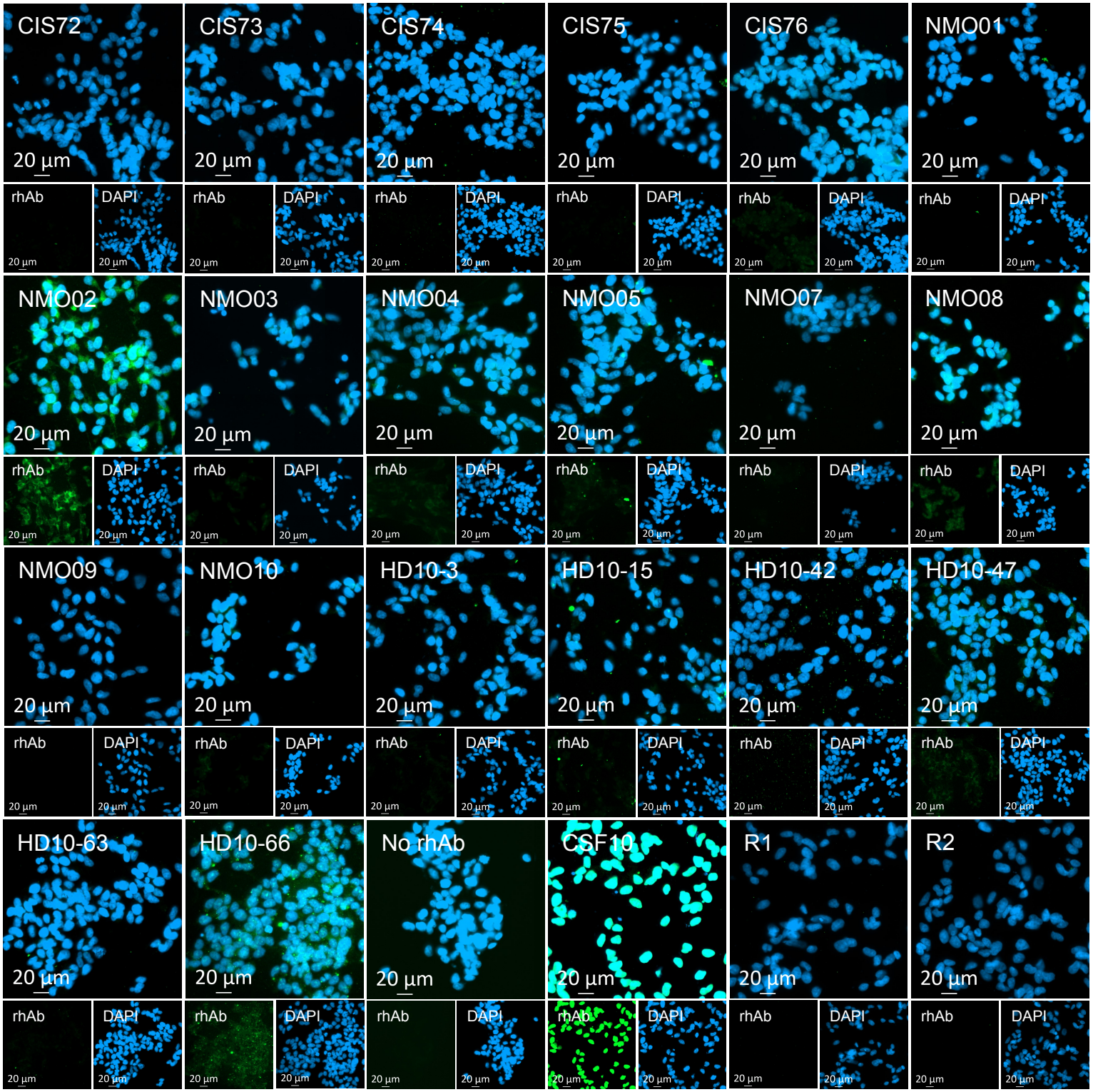
d.

Percent Positive Cells in Cortex by Maximal Signal Intensity							
rhAb	**Channel**	**Image 1**	**Image 2**	**Image 3**	**Image 4**	**Image 5**	**Overall**
CIS19	Red+Green	77.44%	54.88%	35.27%	59.68%		56.82%
	Red	15.41%	39.78%	62.84%	31.91%		37.49%
	Green	7.12%	5.34%	1.89%	8.41%		5.69%
CIS42	Red+Green	58.72%	59.93%	66.98%	70.30%	76.73%	66.53%
	Red	35.68%	28.34%	25.34%	22.35%	13.90%	25.12%
	Green	5.53%	11.66%	7.68%	7.35%	9.31%	8.31%
CIS56	Red+Green	76.70%	76.94%	50.68%	68.38%	71.14%	68.77%
	Red	6.56%	10.57%	43.53%	16.14%	17.97%	18.95%
	Green	16.75%	12.49%	5.79%	15.44%	10.89%	12.27%
CIS68	Red+Green	65.38%	56.78%	53.03%	69.06%		61.06%
	Red	26.00%	40.43%	45.16%	21.79%		33.34%
	Green	8.62%	2.79%	1.78%	9.15%		5.59%
NMO03	Red+Green	74.58%	77.05%	69.72%	66.77%	64.44%	70.51%
	Red	21.24%	20.34%	28.89%	29.95%	29.87%	26.06%
	Green	4.08%	2.61%	1.39%	3.28%	5.69%	3.41%

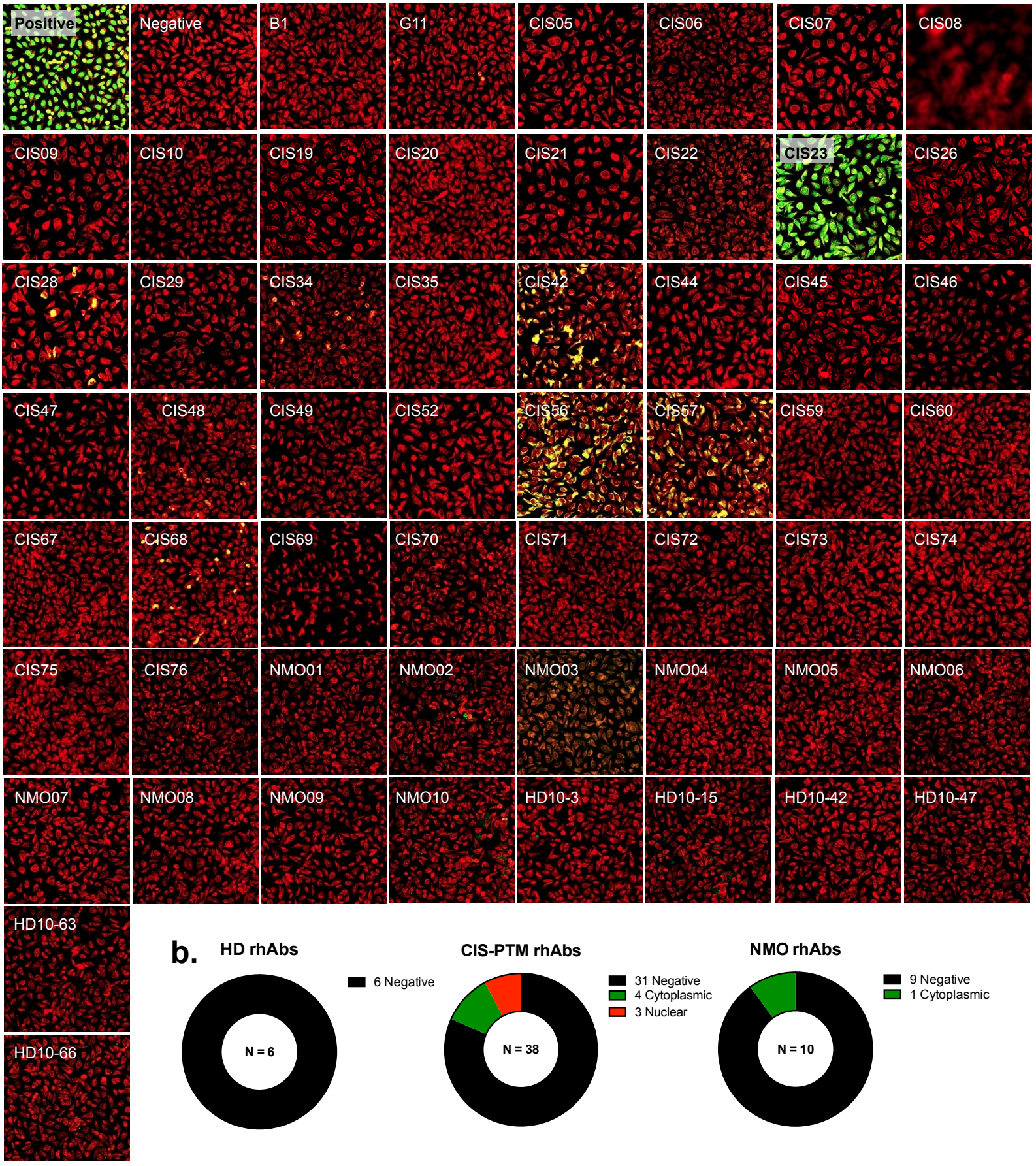
Supplemental Figure 16: Plasmablast rhAbs on Sy5y



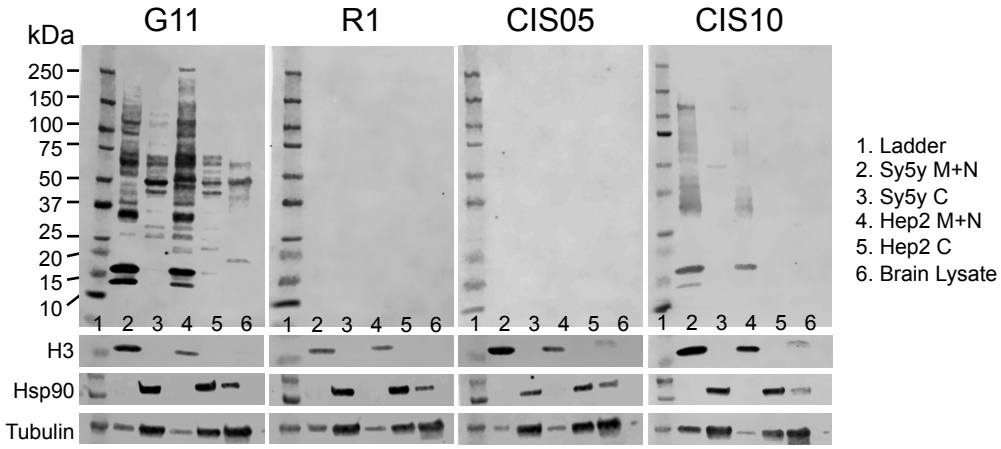
Supplemental Figure 17: Plasmablast rhAbs on Sy5y Continued

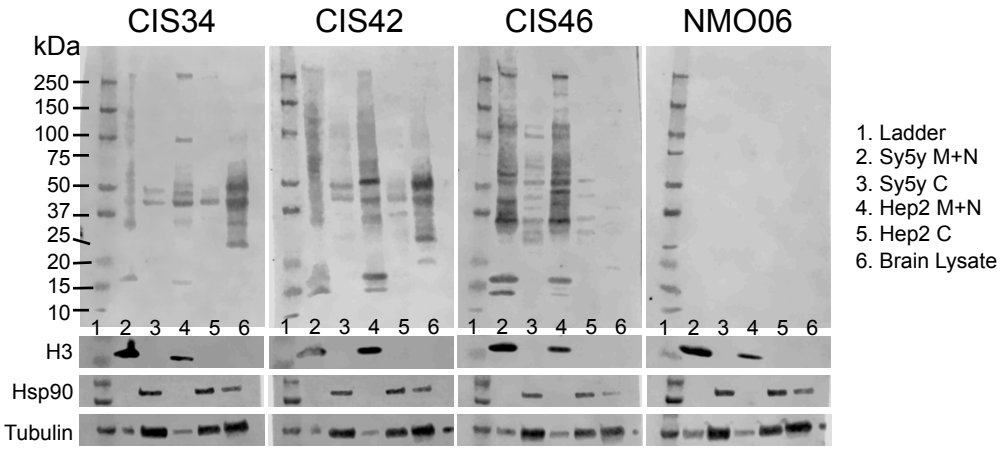


Supplemental Figure 18: Reactivity to Hep2 by ICC

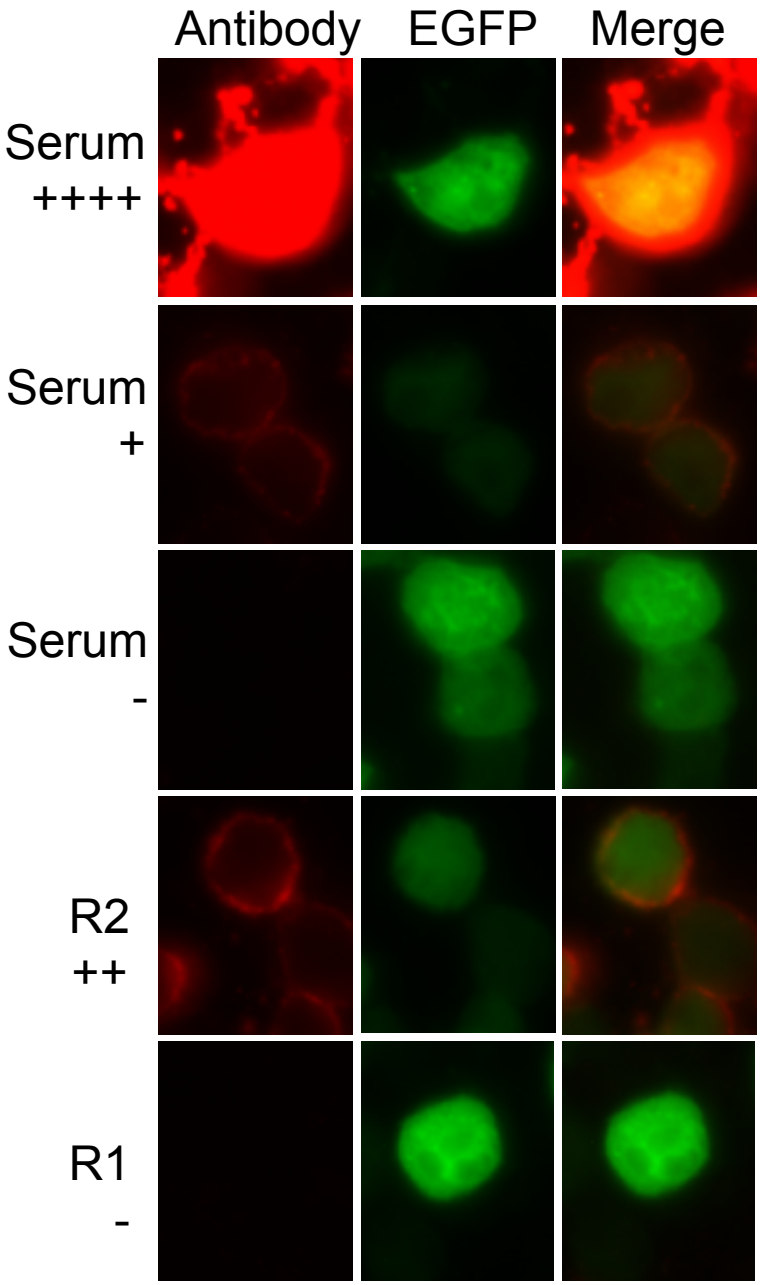


Supplemental Figure 19: Western Blots of Sy5y and Hep2 Cellular Fractions





Supplemental Figure 20: Reactivity to Aquaportin-4 by CBA



Supplemental Figure 21: Reactivity to Sy5y by flow cytometry