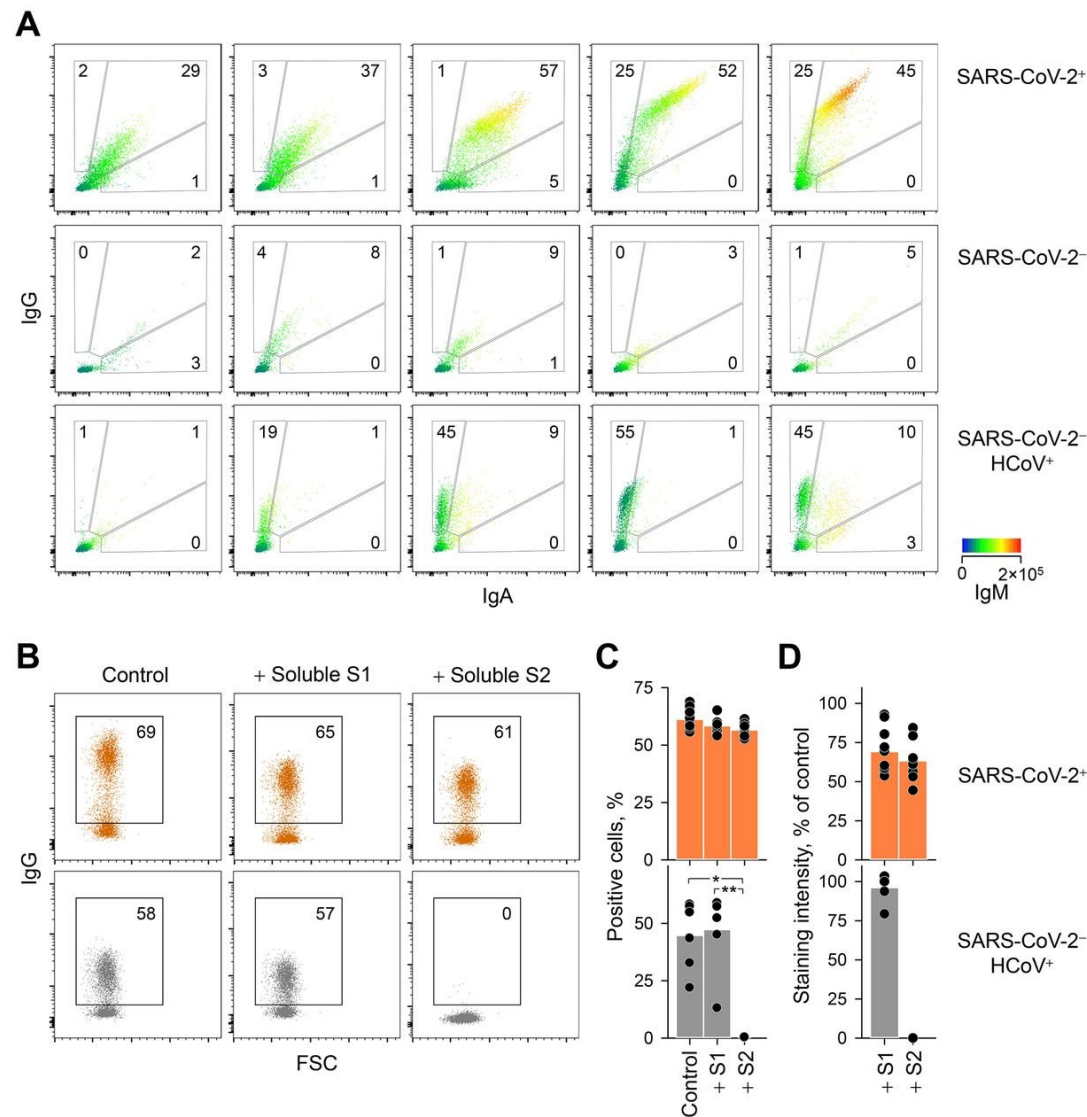# Preexisting and de novo humoral immunity to SARS-CoV-2 in humans

by Kevin W. Ng, Nikhil Faulkner, Georgina H. Cornish, Annachiara Rosa, Ruth Harvey, Saira Hussain, Rachel Ulferts, Christopher Earl, Antoni G. Wrobel, Donald J. Benton, Chloe Roustan, William Bolland, Rachael Thompson, Ana Agua-Doce, Philip Hobson, Judith Heaney, Hannah Rickman, Stavroula Paraskevopoulou, Catherine F. Houlihan, Kirsty Thomson, Emilie Sanchez, Gee Yen Shin, Moira J. Spyer, Dhira Joshi, Nicola O'Reilly, Philip A. Walker, Svend Kjaer, Andrew Riddell, Catherine Moore, Bethany R. Jebson, Meredyth Wilkinson, Lucy R. Marshall, Elizabeth C. Rosser, Anna Radziszewska, Hannah Peckham, Coziana Ciurtin, Lucy R. Wedderburn, Rupert Beale, Charles Swanton, Sonia Gandhi, Brigitta Stockinger, John McCauley, Steve J. Gamblin, Laura E. McCoy, Peter Cherepanov, Eleni Nastouli, and George Kassiotis
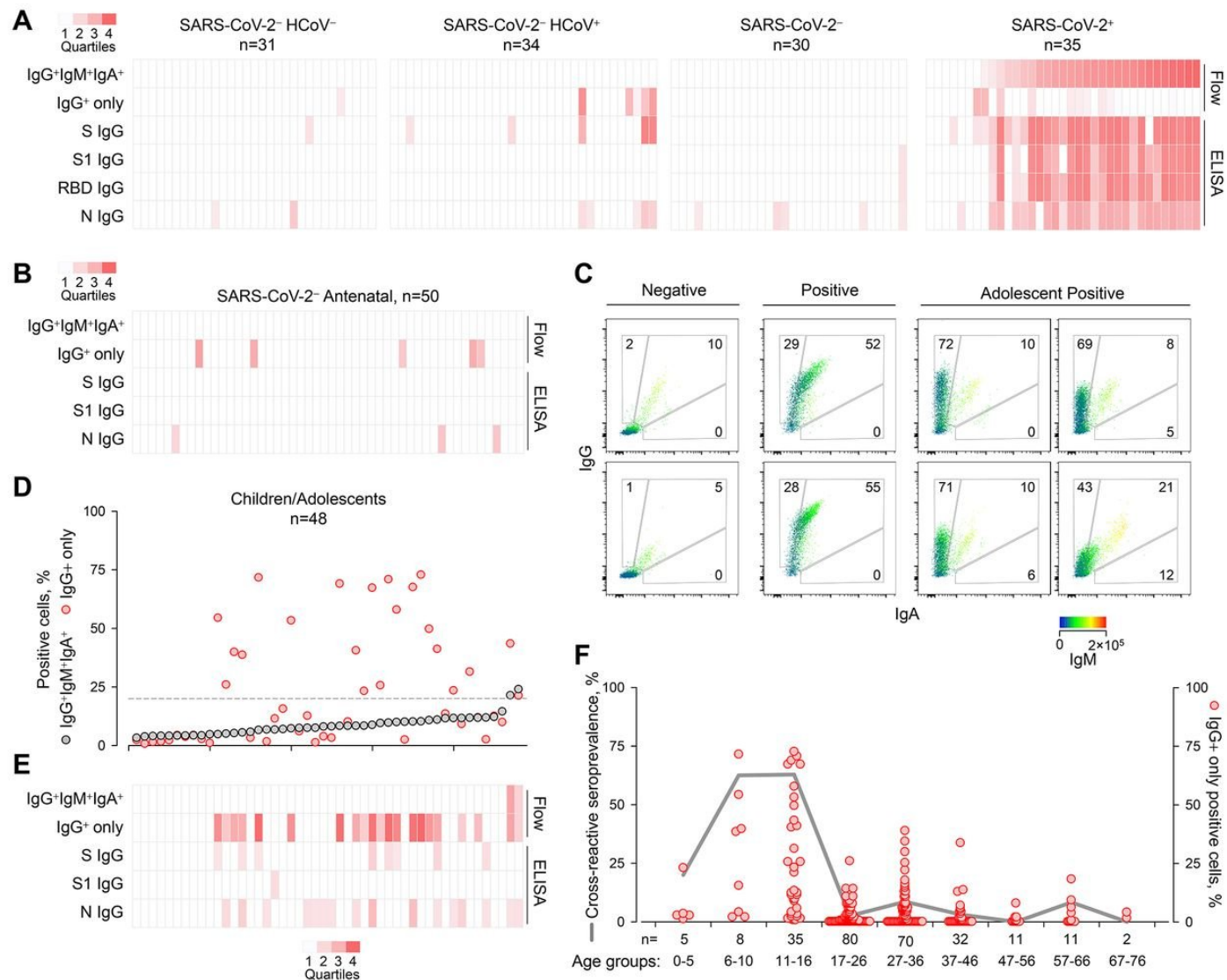
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Fig. 1 Flow cytometric detection and specificity of antibodies reactive with SARS-CoV-2 S. (A) Detection of IgG, IgA, and IgM in five individuals from each indicated group.
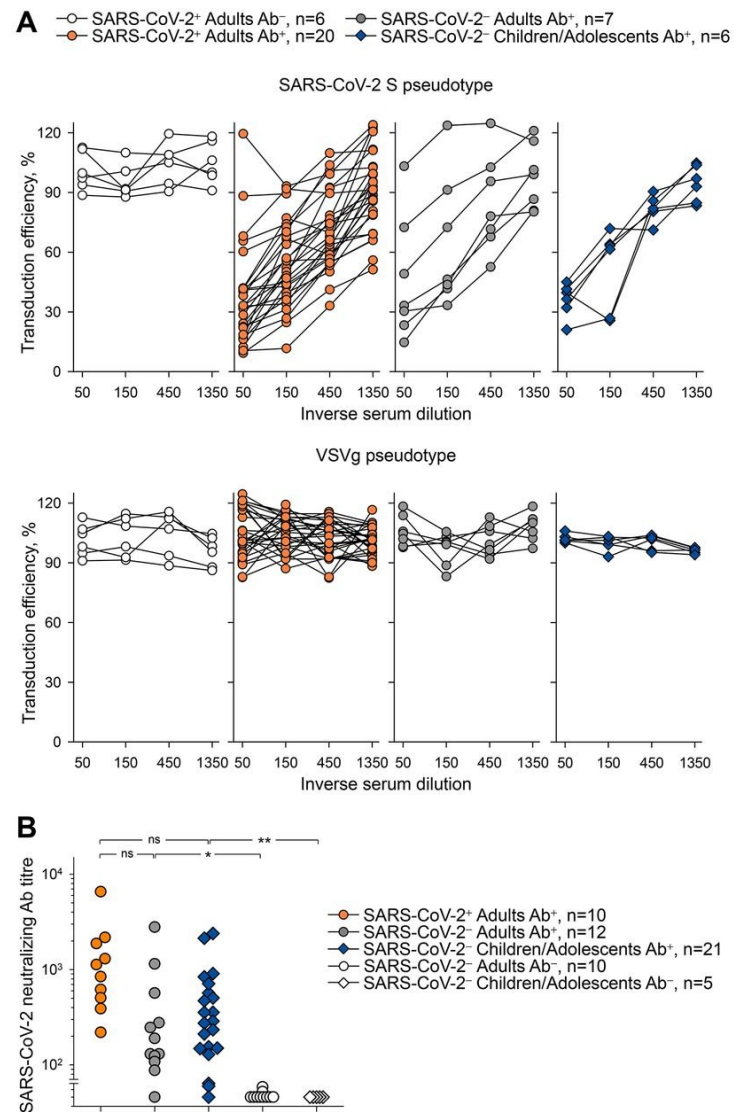

Kevin W. Ng et al. Science 2020;science.abe1107

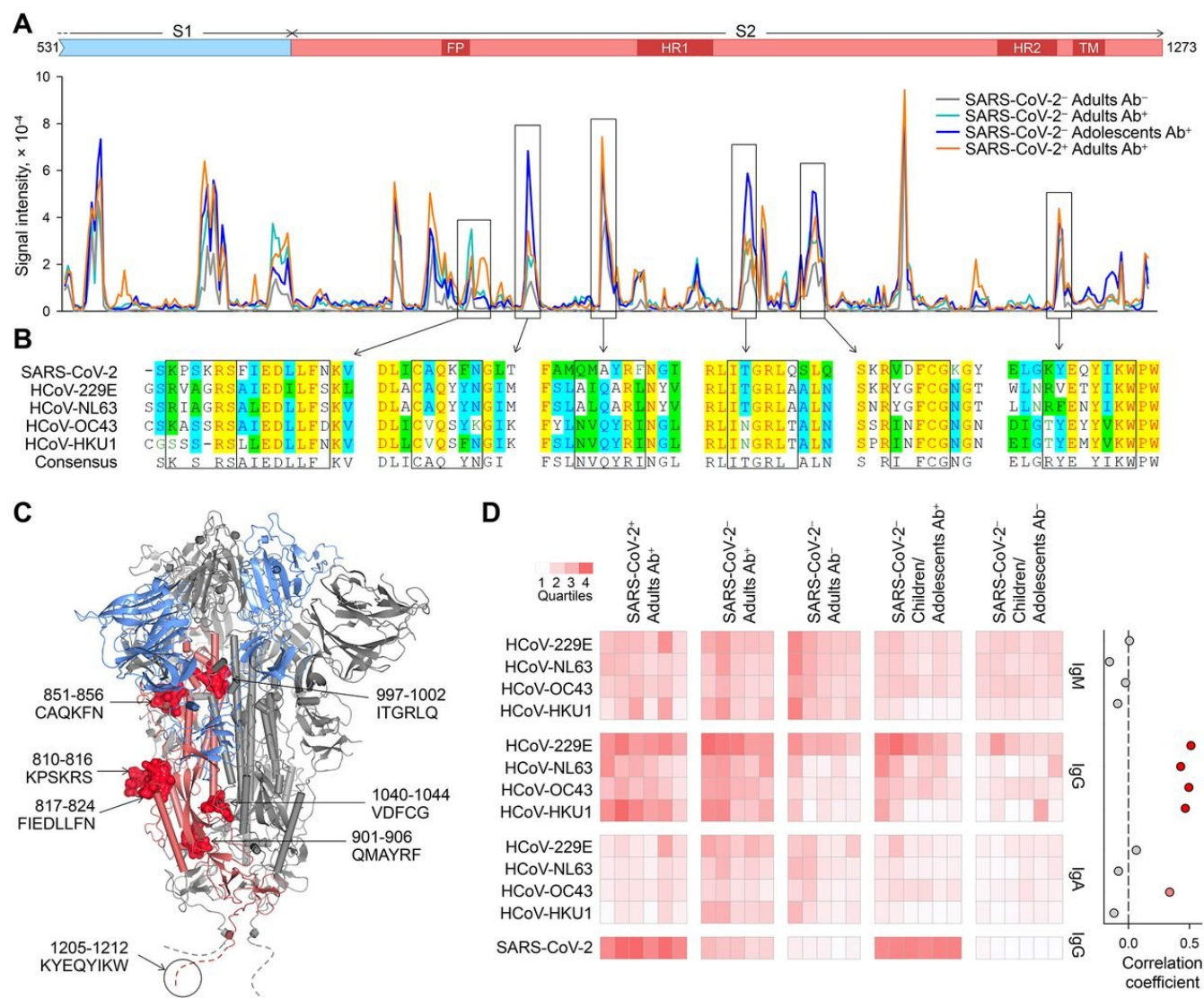# Fig. 2 Prevalence of SARS-CoV-2 S-cross-reactive antibodies detected by different methods.

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Fig. 3 Neutralization of SARS-CoV-2 S pseudotypes and authentic SARS-CoV-2 by SARS-CoV-2-infected and -uninfected patient sera.

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Fig. 4 Mapping of cross-reactive epitopes in SARS-CoV-2 S. (A) Signal intensity for each overlapping peptide along the length of SARS-CoV-2 S covered in the peptide arrays, using pooled sera with (Ab+) or without (Ab−) flow cytometry-detectable SARS-CoV-2 S-reactive

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