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# Engineered immunogen binding to alum adjuvant enhances humoral immunity

Tyson J. Moyer<sup>1,2</sup>, Yu Kato<sup>2,3</sup>, Wuhbet Abraham<sup>1</sup>, Jason Y. H. Chang<sup>1</sup>, Daniel W. Kulp<sup>2,4,5</sup>, Nicki Watson<sup>6</sup>, Hannah L. Turner<sup>2,5,7</sup>, Sergey Menis<sup>2,5</sup>, Robert K. Abbott<sup>2,3</sup>, Jinal N. Bhiman<sup>2,5,8,9</sup>, Mariane B. Melo<sup>1,2,9</sup>, Hayley A. Simon<sup>3</sup>, Sara Herrera-De la Mata<sup>3</sup>, Shu Liang<sup>3</sup>, Gregory Seumois<sup>3</sup>, Yash Agarwal<sup>1,10</sup>, Na Li<sup>1</sup>, Dennis R. Burton<sup>2,5,8,9</sup>, Andrew B. Ward<sup>2,5,7</sup>, William R. Schief<sup>2,5,8,9</sup>, Shane Crotty<sup>2,3,11</sup> and Darrell J. Irvine<sup>1,2,9,10,12,13\*</sup>

<sup>1</sup>Koch Institute for Integrative Cancer Research, Massachusetts Institute of Technology, Cambridge, MA, USA. <sup>2</sup>Consortium for HIV/AIDS Vaccine Development, The Scripps Research Institute, La Jolla, CA, USA. <sup>3</sup>Division of Vaccine Discovery, La Jolla Institute for Immunology, La Jolla, CA, USA. <sup>4</sup>Vaccine and Immunotherapy Center, The Wistar Institute, Philadelphia, PA, USA. <sup>5</sup>International AIDS Vaccine Initiative Neutralizing Antibody Center, The Scripps Research Institute, La Jolla, CA, USA. <sup>6</sup>Whitehead Institute of Biomedical Research, Cambridge, MA, USA. <sup>7</sup>Department of Integrative Structural and Computational Biology, The Scripps Research Institute, La Jolla, CA, USA. <sup>8</sup>Department of Immunology and Microbiology, The Scripps Research Institute, La Jolla, CA, USA. <sup>9</sup>Ragon Institute of Massachusetts General Hospital, Massachusetts Institute of Technology and Harvard University, Cambridge, MA, USA. <sup>10</sup>Department of Biological Engineering, Massachusetts Institute of Technology, Cambridge, MA, USA. <sup>11</sup>Department of Medicine, University of California, San Diego, La Jolla, CA, USA. <sup>12</sup>Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA, USA. <sup>13</sup>Howard Hughes Medical Institute, Chevy Chase, MD, USA. \*e-mail: [djirvine@mit.edu](mailto:djirvine@mit.edu)

**Supplementary Table 1. Sequence of N-terminal cysteine-modified eOD-GT8**

TGCHHHHHHGGDTITLPCRPAAPPHCSSNITGLILTRQGGYSNDNTVIFRPSGGDWRDIARCQIAGTVVSTQLF  
LNGSLAEEEVVIRSEDWRDNAKSICVQLNTSVEINCTGAGHCNISRAKWNNTLKQIASKLREQYGNKTIIFKPSS  
GGDPEFVNHSFNCGGEFFYCDSTQLFNSTWFNSTGSAKFVAAWTLKAAA

**Supplementary Table 2. Sequence of C-terminal cysteine-modified MD39.**

AENLWVTVYYGVPVWKDAETTLFCASDAKAYETEKHNWATHACVPTDPNPQEIHLENVTEEFNMWKNMNV  
EQMHEDIISLWDQSLKPCVKLTPLCVTLQCTNVTNNITDDMRGELKNCSFNMTTELDRDKKQKVYSLFYRLDVV  
QINENQGNRSNNSNKEYRLINCNTSAITQACPKVSFEPIPIHYCAPAGFAILKCKDKKFNGTGPCPSVSTVQCTH  
GIKPVVSTQLLLNGSLAEEEVVIRSENITNNAKNILVQLNTPVQINCTRPNNNTVKSIRIGPGQAFYYTGDIIGDIRQ  
AHCNVSKATWNETLGKVVKQLRKHFGNNTIIRFAQSSGGDLEVTTHSFNCGGEFFYCNTSGLFNSTWISNTSV  
QGSNSTGSNDSITLPCRKQIINMWQRIGQAMYAPPIQGVIRCVSNITGLILTRDGGSTNSTTETFRPGGGDMRD  
NWRSELYKVKVVKIEPLGVAPTRCKRRVVGRRRRRRRAVGIGAVSLGFLGAAGSTMGAASMTLTVQARNLLSGI  
VQQQSNLLRAPEPQQHLLKQDTHWGIKQLQARVLAVEHYLRDQQLLGIWGCSGKLCCTNVPWNSSWSNRNLS  
EIWDNMTWLQWDKEISNYTQIIYGLLEESQNQQEKNEQDLLALDGTKHHHHHHC