

Supplementary Information for

**Customizable OpenGUS immunoassay: a homogeneous detection
system using split β -glucuronidase and label-free antibody**

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Supplementary Figures

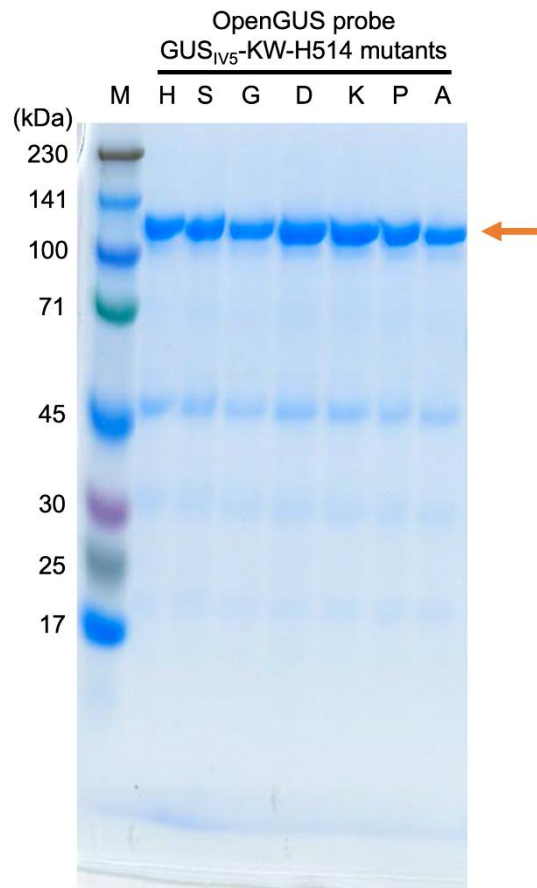


Figure S1. SDS-PAGE analysis of the purified OpenGUS probe carrying different GUS_{IV5}-KW-H514 mutants. M: Protein marker; Orange arrow indicates the monomer of the OpenGUS probe.

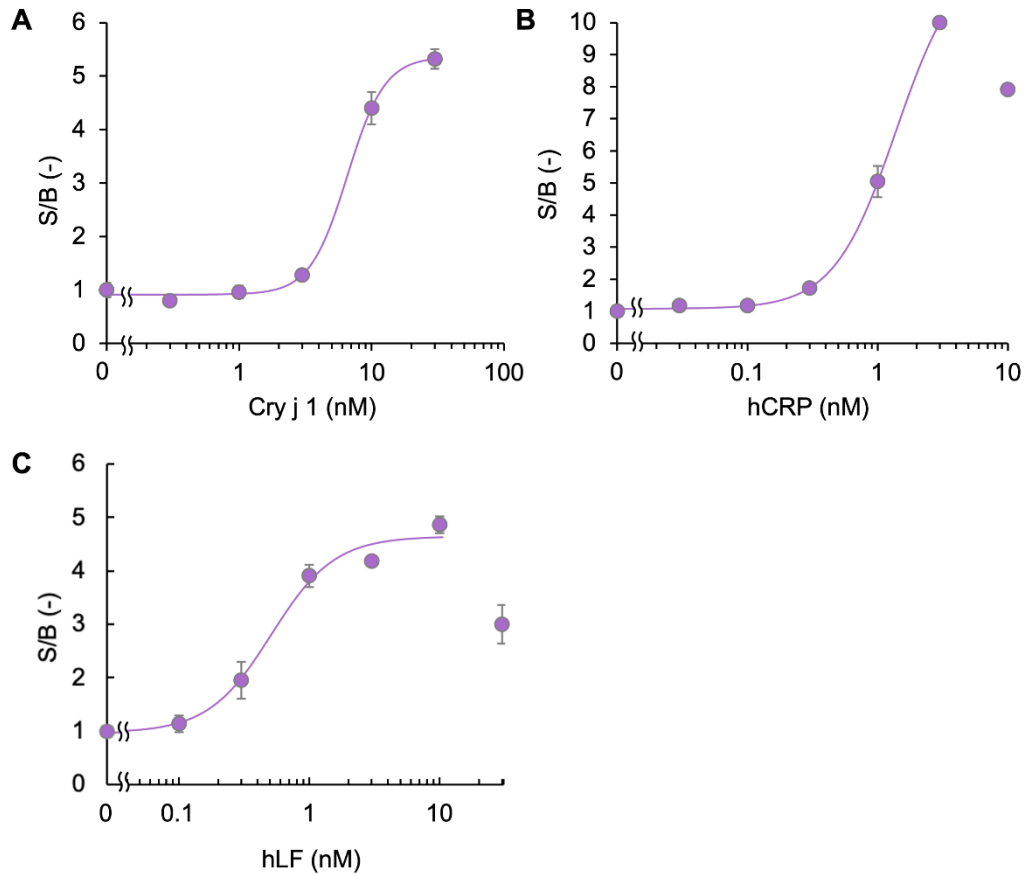


Figure S2. OpenGUS immunoassays for detection of various protein analytes in 5 minutes. (A) Dose-response curve for Cry j 1 detection with two antibodies. (B) Dose-response curve for human C-reactive protein (hCRP) detection with a single antibody, pentamer molar concentration. (C) Dose-response curve for human lactoferrin (hLF) detection with a single antibody, monomer molar concentration. Reaction time after adding fluorogenic substrate: 5 min; $n = 3$; Data were expressed as mean \pm standard deviation.

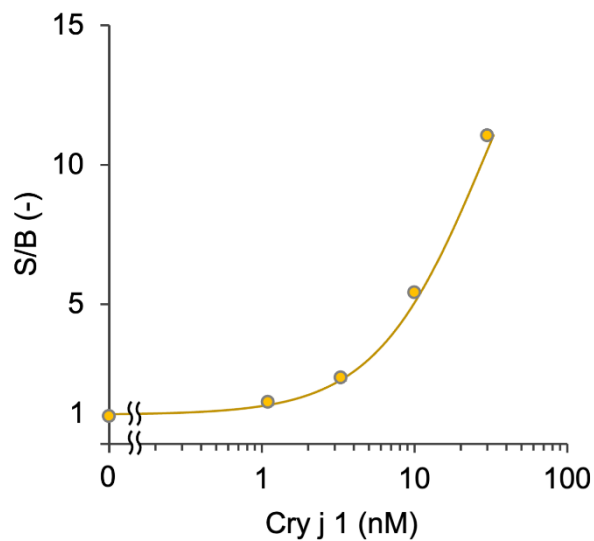


Figure S3. OpenGUS immunoassays for detection of Cry j 1 with colorimetric readout. Reaction time after adding PNPG substrate: 30 min; $n = 3$; Data were expressed as mean \pm standard deviation. LOD: 0.86 nM. Pictures of the reaction wells taken using a smartphone were displayed above the data points in the dose-response curve.