Supporting information

Utilizing Solid-State Nanopore Sensing for High-Efficiency and Precise Targeted Localization in Antiviral Drug Development

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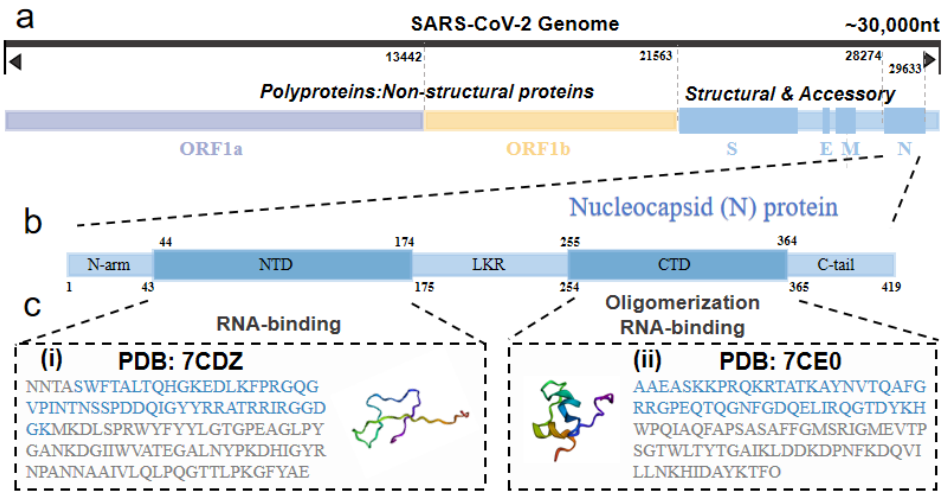

Figure S1. Overview of the proteins used in the experiments.

CERTIFICATE OF ANALYSIS

Product Name	N1b51-100
Order ID	C9591GE170_1
Lot No.	C9591GE170-1/PE4437
Sequence	SWFTALTQHGKEDLKFPRGQGVPINTNSSPDDQIGYYRRATRRIRGGDGK
Modification	N/A
Length	50AA
Storage	-20°C
Recommended Solvent*	ultrapure water
comments	TFA salt

Test Items	Specifications	Results
Molecular Weight	Theoretical MW: 5649.20	Consistent
HPLC purity	≥85.0%	86.6%
Appearance	White lyophilized powder	Conforms
Gross Weight	4 mg	4*1.0mg

CERTIFICATE OF ANALYSIS

Product Name	N2b251-300
Order ID	C9591GE170_3
Lot No.	C9591GE170-3/PE4439
Sequence	AAEASKKPRQKRTATKAYNVTQAFGRRGPEQTQGNFGDQELIRQGTDYKH
Modification	N/A
Length	50AA
Storage	-20°C
Recommended Solvent*	ultrapure water
comments	TFA salt

Test Items	Specifications	Results
Molecular Weight	Theoretical MW: 5636.16	Consistent
HPLC purity	≥85.0%	94.1%
Appearance	White lyophilized powder	Conforms
Gross Weight	4 mg	4*1.0mg

Figure S2. Purity analysis of 7CDZ peptides and 7CE0 peptides.

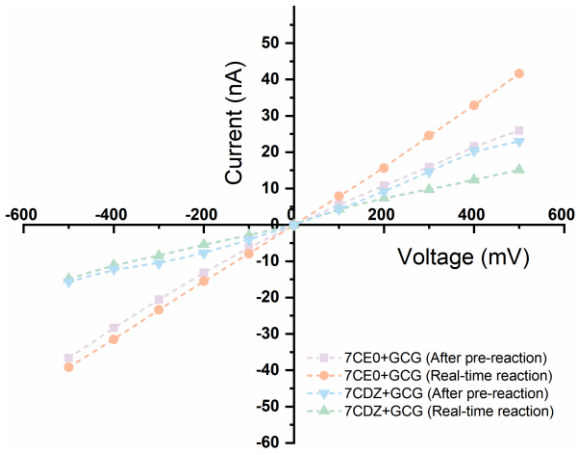

Figure S3. I-V curves of all nanopores used in the experiments. The nanopores calculation results are 11nm (green line), 12nm (blue line), 14nm (purple line) and 17nm (brown line), respectively.

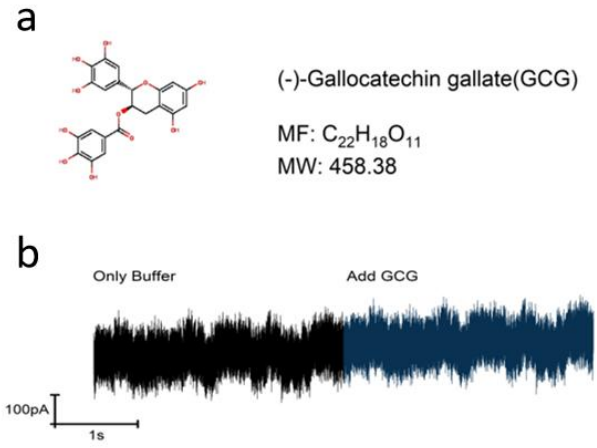

Figure S4. Molecular structure of GCG and current trace changes.

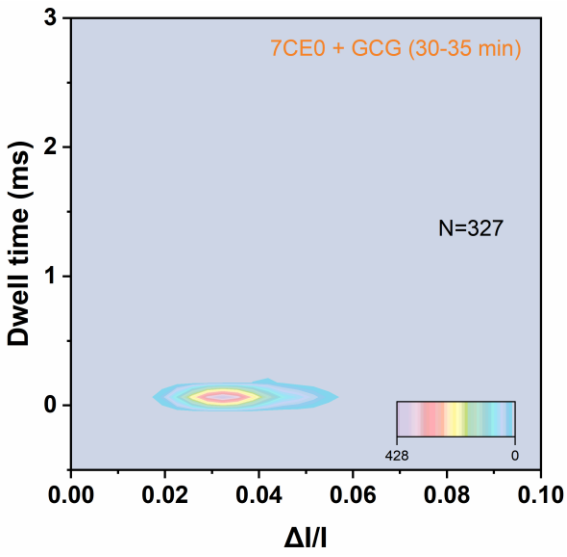

Figure S5. Scatter plot of dwell time and normalized relative current amplitude for translocation events generated in 30-35 min.

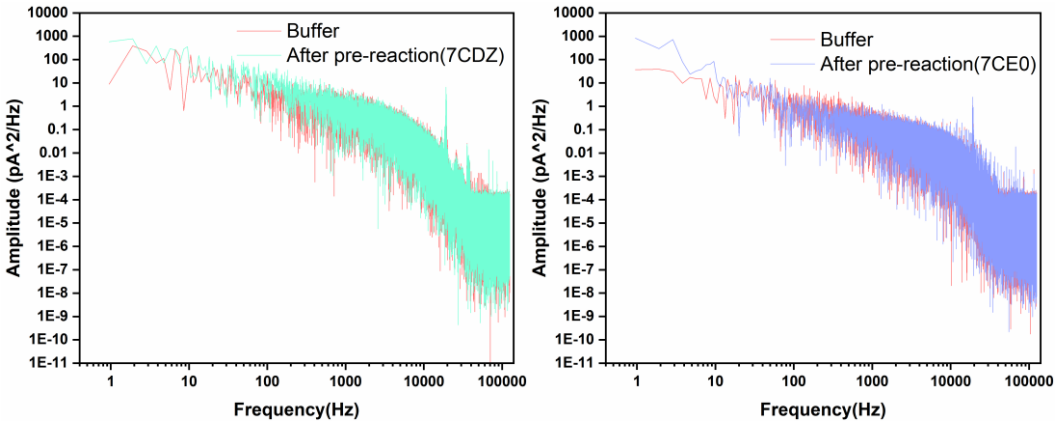

Figure S6. Noise analysis after pre-reaction, blue for 7CE0, green for 7CDZ.