

Supporting information for

Ribonuclease H-Cleavable and Recombinase- Quenching Fluorescent Probes for the Real-time Detection of Strand Invasion Based Amplification

Sonja Elf ¹, Kevin E. Eboigbodin ^{1#}

¹Research and Development, Orion Diagnostica Oy, P.O. BOX 83, FI-02101 Espoo, Finland

#Corresponding author

To whom correspondence should be addressed: Kevin E. Eboigbodin, ¹Research and Development, Orion Diagnostica Oy, P.O. Box 83, FI-02101, Espoo, Finland, Tel: +358453323889, E-mail: k.e.eboigbodin@gmail.com

ORCID:0000-0002-8262-8226

Keywords: probe chemistry; RNase H; isothermal; recombinase; *Streptococcus*; diagnostics; amplification

Table S1. List of microbes used for cross-reactivity testing

Microbial strains
<i>Streptococcus agalactiae</i> ATCC 12386
<i>Streptococcus dysgalactiae</i> ATCC 12388
<i>Streptococcus intermedius</i> ATCC 27335
<i>Streptococcus mutans</i> ATCC 31377
<i>Streptococcus pneumoniae</i> ATCC 6305
<i>Streptococcus sanguis</i> 10556
<i>Streptococcus salivarius</i> 272/2
<i>Bacillus subtilis</i> ATCC 6633
<i>Lactococcus lactis</i> ATCC 11454
<i>Proteus mirabilis</i> 702
<i>Enterobacter cloacae</i> 118
<i>Candida albicans</i> ATCC 14053
<i>Candida parapsilosis</i>
<i>Escherichia coli</i> ATCC 25922
<i>Klebsiella pneumoniae</i>
<i>Neisseria sicca</i> 29193
<i>Neisseria meningitides</i> BAA 335
<i>Staphylococcus aureus</i> ATCC 6538
<i>Staphylococcus epidermidis</i> 2954
<i>Parainfluenza virus 1</i> ATCC - VR-94
<i>Coronavirus</i> ATCC-VR-740
<i>Adenovirus 1</i> ATCC VR-1
<i>Adenovirus 7</i> ATCC VR-7
<i>Enterovirus 71</i> ATCC VR-1432
<i>Rhinovirus 17</i> VR-1663

Figure S1 Melting curve analysis using different detection chemistry

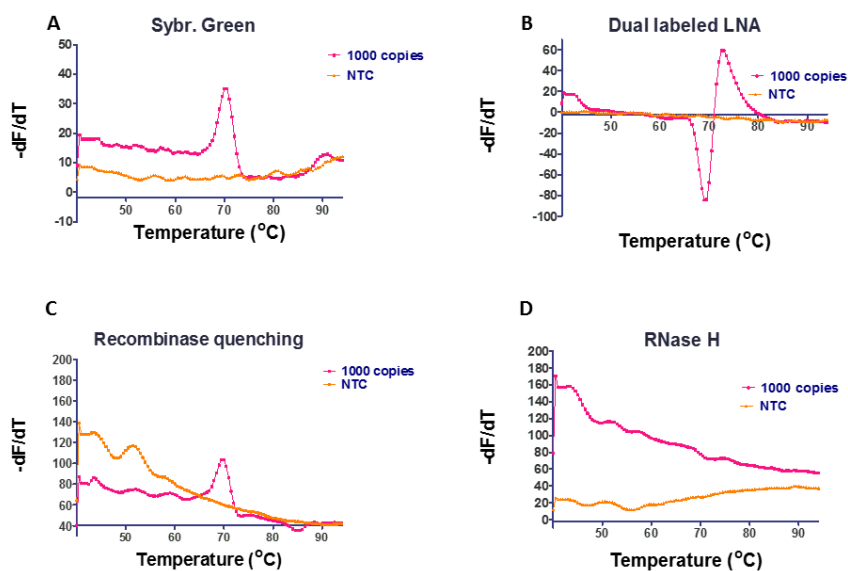


Figure S1. Melting curve analysis of SIBA probe chemistries for the detection of *Streptococcus pyogenes* using (a) SYBR Green 1, (b) LNA probes, (c) RNase H-cleavable probes, and (d) recombinase-quenching probes. 1000 copies of *Streptococcus pyogenes* DNA used for the positive reaction; NTC, no template control.

Figure S2 SIBA multiplex detection

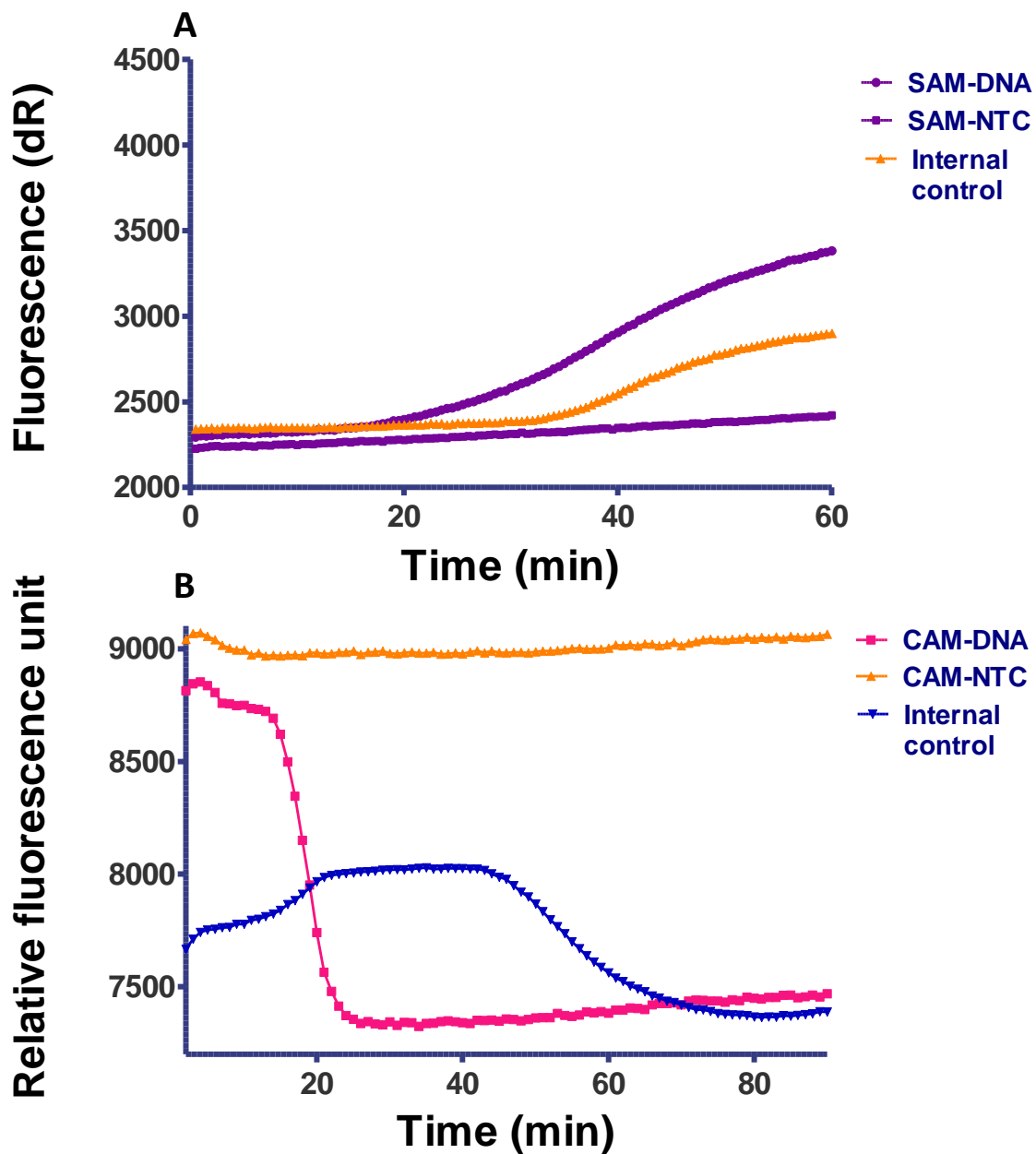


Figure S2. Detection of multiplex SIBA reactions novel probe chemistries (a) Salmonella assay (b) Campylobacter assay with and the internal control (IC) assay. Salmonella and IC control detected in the same reaction tube using RNase H-cleavable probes. Campylobacter and IC control reactions were detected in the same reaction tube using recombinase-quenching probes.