

Supplementary Information (SI)

A Flexible and Low-cost Polypropylene Pouch for Naked-Eye detection of Herpes Simplex Virus

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Table 1: Primers used for LAMP and their gene location on HSV genome

Virus	Target Sequence Location	Gene Name	Primer Name	Primer Sequences (5'-3')
HSV 1	<p>Nucleotide position (9721-10080)</p> <p>ATACGCCAGGGCTGGACAGTCGCAAGCAGGCCCGCCAGCCACACACCTGTGAAAGGCTGGG F3(9756-9773)</p> <p>TGTGTGAACCTTTGACTATTCGCGCACCCGCCGCTGTGTAGGGCGACAGGATTTGGACCT F2(9788-9807) LPF(9810-9833)</p> <p><u>ACCAACGGAAACGTCCTGGACGGACCCCGTTCTGCCGCGGACGATGAAGCGGGCCTGCAG</u> F1(9836-9857)</p> <p>CCGAAGCCCTCACCACGCCGCCCATCATCGCCACGTCGGACCCACCCCGCGACGG B1(9926-9945) LPB(9948-9967)</p> <p><u>GACGCCGCCACAAAAGCAGACGCCGACGCCACTCCCGGCCCTCTAACGATGCCTC</u> B2(9969-9987) B3(10008-10026)</p> <p><u>GACGGAAACCCGTCCGGGTTTCGGGGGCGAACCGGCCCTGTCTCGTCTCAGGGCCGGC</u></p>	UL1	<p>Set A:</p> <p>HSV1-F3 HSV1-B3 HSV1-FIP HSV1-BIP HSV1-LPF HSV1-LPB</p>	<p>5_-CAGCCACACACCTGTGAA-3_(F3) 5_-TCCGTCGAGGCATCGTTAG-3_(B3e) 5_-CCAGACGTTCCGTTGGTAGGTCACCTTTGACTATTCGCGCACCC-3_(F1c-F2) 5_-CCATCATCGCCACGTCGGACTCGGCGTCTGCTTTTTGTG-3_(B1-B2e) 5_-AAATCCTGTCCCTACACAGCGG-3_(LPFc) 5_-CACCCCGCGACGGGACGCCG-3_(LPB)</p>
HSV2	<p>Nucleotide position (138901-139140)</p> <p>CGCCTCAT <u>GGCCTTGACCGAGGACAC</u> <u>GTCCTCCGATTCGCTACGTC</u>CGCTCCGAGAAG F3(138909-138926) F2(138926-138945)</p> <p><u>ACGCCCTCCCTGTGTGTCGGCCACCGCCATGGCACCCCTCAGTCGACCCAAGCGGGAACCG</u> LPF(138961-138980) F1(138984-139004)</p> <p>ACCGCCCCGCA<u>ACCACTACTCCCCCGA</u>CGAGATGGCCACACAAGCCGCAACGGTTCGCC B1(139030-139050) LPB(139053-139072)</p> <p><u>GTTACGCCGGAGGAAACGGCAGTCGCCTCCCCGCCGCGACTGCATCCGTGGAGTCGTCG</u> B2(139082-139099) B3(139120-139137)</p>	UL5	<p>Set B:</p> <p>HSV2-F3 HSV2-B3 HSV2-FIP HSV2-BIP HSV2-LPF HSV2-LPB</p>	<p>5_-GGCCTTGACCGAGGACAC-3_(F3) 5_-CGACTCCACGGATGCAGT-3_(B3e) 5_-TCGACTGAGGGTGCCATGGCGTCTCCGATTCGCCTACG-3_(F1c-F2) 5_-GCAACCACTACTCCCCCGACCGTTTCTCCGGCGTAA-3_(B1-B2c) 5_-GCCGACACAGGGAGGGCGT-3_(LPFc) 5_-GATGGCCACACAAGCCGCAA-3_(LPB)</p>

Table 2: LAMP optimization: time, temp and sensitivity

Virus	Primers	Detection time (amplified at 10',20',30', 40')	Temperature (amplified at 10',20',30', 40')	Sensitivity (Target DNA was diluted 10 folds from 10 ng/μL-1fg/μL)
HSV 1	Set A (Table 1)	Saturation time: 50ng/reaction: 20'-40' 50fg/reaction: 40'	60-66°C	50fg/reaction
HSV 2	Set B (Table 1)	Saturation time: 50ng/reaction: 30'-40' 5fg/reaction: 40'	60-63°C	5fg/reaction