

Supplementary Information

**Sequence-specific recognition of microRNAs and other short nucleic acids with
solid-state nanopores**

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Oligonucleotide Label	Sequences (5' → 3')
ssBio34	CAGTTGAGGATCCCCATAA T GCGGCTGTTTTCTG
ssBio34 complement (i.e. 'target' sequence)	CAGAAAACAGCCGCATTATGGGGATCCTCAACTG
Decoy 1	CAGGGCTAGCAAAGGATTTTGCTATAACATGGGTGGCAAG
Decoy 2	TTTTTAAACCTGATGAAACATTTGTACATTCAGGTTTTATC
Decoy 3	ATCAGGACCACATTCAAGAGGCCAGGAACCAAGACAGTGA
ssBio23	TCCCCTATCACGAT T AGCATTAA
miR155	UUA AUGCUAAUCGUGAUAGGGGU
DNA miR155 homolog	TTAATGCTAATCGTGATAGGGGT

Table S1. Oligonucleotide sequences **T** signifies biotinylated thymine.

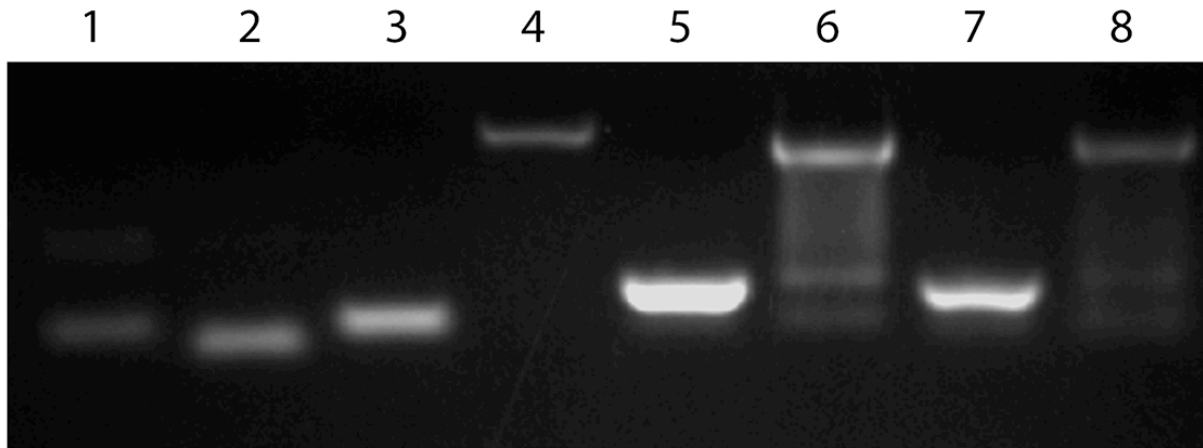


Figure S1. miRNA annealing gel Agarose gel electrophoresis showing miR155 (lane 1), 23 nt miR155 DNA homolog (lane 2), ssBio23 (lane 3), ssBio23+MS (lane 4), annealed ssBio23-miR155 heteroduplex (lane 5), annealed ssBio23-miR155+MS (lane 6), ssBio23 annealed to miR155 DNA homolog (lane 7), and ssBio23 annealed to miR155 DNA homolog +MS (lane 8).

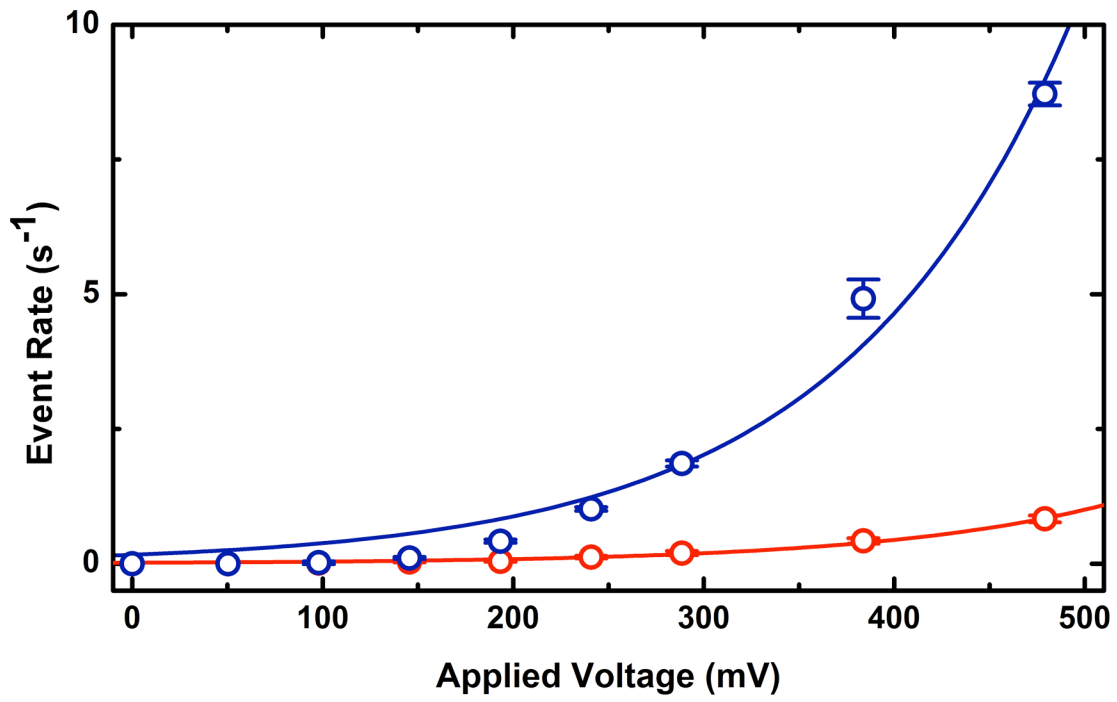


Figure S2. Additional DNA data set Event rate vs. applied voltage for ssBio34 (red) and dsBio34 (blue) with MS bound (1 μ M) on a second SS-nanopore. All solid lines are exponential fits to the data.