

**Supplementary Table S1.** Solid-phase primers and probes for strip PCR

Well	Target	Label	Sequence	Target region
1	GAPDH F	6FAM	tgtgctcccactctgatttc	GAPDH
	GAPDH Probe 6FAM		aaaagagctaggaaggacaggcaacttggc	
	GAPDH R		cctagtcccagggttggatt	
	TBP F	HEX	gcaccactccactgtatecc	TBP
	TBP Probe HEX		acccccateactctgccacgc	
	TBP R		cccagaactctccgaagctg	
2	HSV1 F	6FAM	cgeatcaagaccacctcctc	Glycoprotein B (UL27) gene
	HSV1 Probe 6FAM		tggcaacgcgcccaac	
	HSV1 R		gtcagctcgtgRttctg	
	VZV F	HEX	tactaccagtcatttctatccatctg	ORF29
	VZV Probe HEX		tgtctttcacggaggcaaacacgt	
	VZV R		gaaaacccaaaccgttctcgag	
	HSV2 F	Cy5	cgeatcaagaccacctcctc	Glycoprotein B (UL27) gene
	HSV2 Probe Cy5		cggcagatcgccccag	
	HSV2 R		gtcagctcgtgRttctg	
3	HTLV-1 F	6FAM	ggccacctgtccagagca	Tax protein (tax) gene
	HTLV-1 Probe 6FAM		Mtcacctgggacccatcgatgga	
	HTLV-1 R		actgtagagctgagccgataacg	
	HHV8 F	HEX	cctctgtccccattcattg	ORF65: small capsid protein on hexon tips; herpesvirus core gene UL35 6FAMily
	HHV8 Probe HEX		ccggcgtcagacattctcacaacc	
	HHV8 R		cgtttccgtcgtggatgag	
	HHV6 F	Cy5	gaagcagcaatcgcaacaca	DNA polymerase catalytic subunit (U38) gene
	HHV6 Probe Cy5		aaccctgtcgcgcctccc	
	HHV6 R		acaacatgtaactcgggtgtacggt	
4	EBV F	6FAM	tagggccagtcacaagtgtg	BALF5
	EBV Probe 6FAM		cggtcacaatctccacgctg	
	EBV R		acctgcgaagacatagag	
	HHV7 F	HEX	cggaaagtcactggagtaatgacaa	ORF51
	HHV7 Probe HEX		ctcgcagattgcttggccatg	
	HHV7 R		ccaatcctccgaaaccgat	
	CMV F	Cy5	tcgccccgaagagg	UL83: beta gene
	CMV Probe Cy5		caccgacgagattccgacaacg	
	CMV R		cggccggattgtggatt	
5	<i>C. trachomatis</i> F	6FAM	gaaaagaacccttgaaggagg	16S-23S rRNA intergenic spacer
	<i>C. trachomatis</i> Probe 6FAM		caaaggcagccgcaac	
	<i>C. trachomatis</i> R		cttaactcctggctcatcatg	
	Adenovirus F	HEX	gacatgactttgaggtgga	hexon protein gene
	Adenovirus Probe HEX		cccatggaYgagccaccct	
	Adenovirus R		tcgatgacgcccgggtg	
6	<i>Toxocara</i> F	6FAM	agcacMattgcacgtatgc	5.8S rRNA gene and internal transcribed spacer 2
	<i>Toxocara</i> Probe 6FAM		tgtggctgRtgcgttggagg	
	<i>Toxocara</i> R		ccttctaactgccagcac	
	<i>T. gondii</i> F	HEX	tcccctctgctggcgaaggt	B1 gene for antigen protein
	<i>T. gondii</i> Probe HEX		tctgtgcaacttgggtattcgcag	
	<i>T. gondii</i> R		agcgttcgtggtcaactatcgattg	
	<i>Acanthamoeba</i> F1	Cy5	tcaaagcaggcagatYcaatt	18S rRNA gene
	<i>Acanthamoeba</i> F2		tcaaagcaggcagatttaacca	
	<i>Acanthamoeba</i> Probe Cy5		ctGccAccgAatAc	
	<i>Acanthamoeba</i> R		gtcctattccattatccatgctaa	
	<i>Candida</i> F	6FAM	tggaggagtgattgtctgct	18S rRNA gene
	<i>Candida</i> Probe <i>candida</i> sp. 6FAM		ttaacctactaaatagtgtgctagc	
<i>Candida</i> Probe <i>glabrata</i> HEX	ttaacctactaaatagtgtgctagc			
	<i>Candida</i> Probe <i>krusei</i> Cy5		ttaacctgctaaatagggtcgcgagc	
	<i>Candida</i> R		acagacctgtattgcctcaa	
	<i>Fusarium</i> F	6FAM	gggcccaggtgtaattgt	18S rRNA gene, partial sequence; internal transcribed spacer 1, 5.8S ribosomal RNA gene, and internal transcribed spacer 2, complete sequence; and 28S rRNA gene
<i>Fusarium</i> Probe 6FAM	atagagggtgagagccccgtctggt			
<i>Fusarium</i> R	tctggccggatttagcttt			
	<i>Aspergillus</i> F	HEX	acccccctgagccagtcg	18S rRNA gene
	<i>Aspergillus</i> Probe HEX		acgtccctgccctttgtacacaccg	
	<i>Aspergillus</i> R		gccagcgagatcaccttgg	
9	<i>M. tuberculosis</i> F	6FAM	ggctgtggtagcagacc	Insertion sequence IS6110 transposase (orfB) gene
	<i>M. tuberculosis</i> Probe 6FAM		tgtcgacctggcagggttcg	
	<i>M. tuberculosis</i> R		cgggtccagatggcttgc	
	<i>P. acnes</i> F	HEX	gcgtgagtgacgtaatgggta	16S rRNA gene
	<i>P. acnes</i> Probe HEX		agcgttgcggattattggcg	
	<i>P. acnes</i> R		ttccgacgcgatcaacca	
10	<i>T. pallidum</i> F	6FAM	ccaagcgttactaagatg	47-kDa antigen gene
	<i>T. pallidum</i> Probe 6FAM		ttcgaatcttattctcgtgtca	
	<i>T. pallidum</i> R		ctgggacaaactcatic	
11	Fungal 28S rRNA F	HEX	gcataatcaataagcggagaaaag	28S rRNA gene
	Fungal 28S rRNA Probe HEX		cggcgagtgaaagcggsaaragctc	
	Fungal 28S rRNA R		ttagctttagatgRaRttaccacc	
12	Bacterial 16S rRNA F	6FAM	aggcagcagtDRggaat	16S rRNA gene
	Bacterial 16S rRNA Probe 6FAM		tgccagcagccggtaatacRDag	
	Bacterial 16S rRNA R		ggactacYVgggtatctaat	

*Candida* sp., *Candida* species; *Chlamydia trachomatis*, *C. trachomatis*; CMV, cytomegalovirus; EBV, Epstein-Barr virus; F, forward; GAPDH, glyceraldehyde 3-phosphate dehydrogenase; HHV, human herpes virus; HTLV, human T-cell lymphotropic virus; HSV, herpes simplex virus; *M. tuberculosis*, *Mycobacterium tuberculosis*; *P. acnes*, *Propionibacterium acnes*; R, reverse; rRNA, ribosomal RNA; TBP, TATA-binding protein; *T. gondii*, *Toxoplasma gondii*; VZV, varicella-zoster virus.

**Supplementary Table S2.** Repeatability tests with a negative control

Cq values		Day 1		Day 2		Day 3		Day 4		Day 5		All days		
		Average	SD	Average	SD	Average	SD	Average	SD	Average	SD	Average	SD	CV (%)
1	GAPDH	33.18	0.53	33.03	0.20	33.22	1.07	32.95	0.65	32.10	1.30	32.90	0.39	1.4
	TBP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
2	HSV1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	HSV2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	VZV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
3	HTLV-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	HHV6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	HHV8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
4	EBV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	CMV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	HHV7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
5	<i>C. trachomatis</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	Adenovirus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
6	<i>Toxocara</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	<i>T. gondii</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	<i>Acanthamoeba</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
7	<i>Candida</i> sp.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	<i>C. krusei</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	<i>C. glabrata</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
8	<i>Fusarium</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	<i>Aspergillus</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
9	<i>M. tuberculosis</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
	<i>P. acnes</i>	38.76	1.68	0.00	0.00	36.32	0.36	0.00	0.00	35.02	-	36.70	1.90	5.2
10	<i>T. pallidum</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
11	Fungal 28S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
12	Bacterial 16S	39.86	3.21	40.69	3.26	39.48	1.48	37.91	-	38.55	2.41	69.30	1.09	2.8

We tested the strip PCR with a negative control in triplicate over 5 days of testing. The intra- and interassay variability indicated that the assay with the negative control was highly reproducible, except for occasional contamination with *P. acnes* and bacterial 16S from the samples or reagents, based on the low standard deviation (<1.30) and low coefficient of variation (CV, 0.0%-1.4%)

CV(%) = standard deviation of population x100 / average

When contamination from *P. acnes* and *bacterial 16S* in the reagents and from the ocular surface was occasionally observed, we calculated the average value and SE. Bacterial 16S, bacterial 16S ribosomal RNA; Cq, quantification cycle; CV, coefficient of variation; fungal 28S, fungal 28S ribosomal RNA; SD, standard deviation.

**Supplementary Table S3.** Repeatability tests using a low concentration of positive controls (each target pathogen DNA of well)

Cq values	Day 1		Day 2		Day 3		Day 4		Day 5		All days			
	Average	SD	Average	SD	Average	SD	Average	SD	Average	SD	Average	SD	CV (%)	
1	GAPDH	33.33	0.42	33.27	0.66	32.79	0.34	33.06	0.23	32.13	1.25	32.81	0.43	1.3
	TBP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
2	HSV1	32.06	0.28	32.41	0.55	31.26	1.06	32.24	0.44	32.00	0.45	31.98	0.44	1.4
	HSV2	33.67	1.08	33.02	0.94	31.92	1.08	32.78	0.82	32.07	0.69	32.45	0.46	1.4
	VZV	33.30	0.45	33.48	1.39	31.83	1.31	32.51	0.49	32.54	0.20	32.59	0.59	1.8
3	HTLV-1	33.13	0.25	33.53	1.18	31.86	1.24	32.87	0.20	32.25	0.41	32.63	0.63	1.9
	HHV6	33.00	0.30	34.80	1.58	32.01	1.21	32.21	0.37	32.57	0.34	32.90	1.12	3.4
	HHV8	32.67	0.48	32.69	0.55	31.91	1.05	32.04	0.66	31.90	0.22	32.14	0.33	1.0
4	EBV	34.28	0.38	35.62	1.81	33.19	1.27	33.85	0.42	33.72	0.86	34.09	0.92	2.7
	CMV	33.01	0.29	34.80	2.44	31.33	1.22	31.86	0.57	32.19	0.18	32.55	1.34	4.1
	HHV7	34.44	0.78	34.45	0.25	33.71	0.36	34.01	0.26	33.92	0.59	34.02	0.27	0.8
5	<i>C. trachomatis</i>	34.69	0.26	35.14	2.26	33.68	0.87	33.91	0.12	34.67	1.26	34.35	0.59	1.7
	Adenovirus	32.31	1.71	33.49	0.72	31.91	1.74	32.11	0.38	32.33	0.63	32.46	0.61	1.9
6	<i>Toxocara</i>	32.25	0.06	32.41	0.42	31.52	0.83	31.69	0.05	31.84	0.15	31.87	0.33	1.1
	<i>T. gondii</i>	33.04	0.13	33.67	0.77	31.30	1.61	32.55	0.41	32.08	0.44	32.40	0.86	2.7
	<i>Acanthamoeba</i>	32.60	0.31	32.82	0.31	31.95	0.13	31.93	0.60	31.80	0.14	32.12	0.41	1.3
7	<i>Candida</i> sp.	34.64	0.80	33.17	1.27	34.56	1.06	33.39	0.17	33.28	0.33	33.60	0.56	1.7
	<i>C. krusei</i>	33.79	0.59	34.97	1.37	33.08	1.67	33.52	0.16	33.50	0.30	33.77	0.71	2.1
	<i>C. glabrata</i>	33.58	0.46	34.34	0.53	34.19	0.30	33.12	0.40	33.09	0.32	33.69	0.58	1.7
8	<i>Fusarium</i>	30.58	0.06	32.41	1.88	29.41	0.90	29.52	0.20	29.61	0.05	30.24	1.26	4.2
	<i>Aspergillus</i>	31.93	0.54	31.51	0.08	30.60	1.40	31.06	0.55	30.89	0.68	31.02	0.33	1.1
9	<i>M. tuberculosis</i>	33.30	0.40	33.80	0.61	32.19	1.37	32.58	0.23	32.49	0.23	32.76	0.61	1.9
	<i>P. acnes</i>	32.11	0.55	32.14	0.88	30.50	1.19	31.56	0.92	31.25	0.53	31.36	0.59	1.9
10	<i>T. pallidum</i>	32.38	1.02	31.83	0.34	31.35	0.55	31.07	0.46	31.02	0.17	31.32	0.32	1.0
11	Fungal 28S	34.55	0.07	34.45	0.84	33.50	0.19	34.98	1.93	32.93	0.81	33.97	0.80	2.4
12	Bacterial 16S	35.49	0.57	35.81	0.98	35.48	0.77	36.27	0.68	35.18	0.29	35.68	0.40	1.1

We added positive controls (each target pathogen DNA of well) to each well in triplicate over 5 days of testing. The intra- and interassay variability indicated that the assay was highly reproducible based on the low standard deviation (<2.44) and low coefficient of variation (CV, 0.0%-4.2%).

**Supplementary Table S4.** Repeatability tests using a low concentration of the positive control (all target pathogen DNA of strip)

Cq values	Day 1		Day 2		Day 3		Day 4		Day 5		All days			
	Average	SD	Average	SD	Average	SD	Average	SD	Average	SD	Average	SD	CV (%)	
1	GAPDH	32.92	0.65	32.65	0.28	32.41	1.34	33.02	0.49	33.60	0.80	32.92	0.45	1.4
	TBP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
2	HSV1	30.58	0.73	31.10	0.40	31.18	0.24	31.33	0.39	32.01	0.34	31.24	0.51	1.6
	HSV2	31.47	0.45	31.83	0.03	32.07	0.09	32.38	0.49	33.37	1.07	32.22	0.72	2.2
	VZV	31.43	0.80	31.90	0.76	31.95	0.37	31.95	0.40	32.73	0.53	31.99	0.47	1.5
3	HTLV-1	31.67	0.81	32.54	0.31	32.46	0.30	32.56	0.65	32.85	0.44	32.42	0.44	1.4
	HHV6	31.75	0.75	32.63	0.05	32.57	0.10	32.32	0.30	33.19	0.54	32.49	0.52	1.6
	HHV8	31.44	0.70	31.48	0.36	31.71	0.34	31.62	0.58	32.34	0.12	31.72	0.36	1.1
4	EBV	32.60	0.61	32.54	0.17	32.70	0.20	32.80	0.46	33.26	0.40	32.78	0.28	0.9
	CMV	30.64	0.51	31.19	0.41	31.28	0.47	31.41	0.24	32.81	1.23	31.47	0.81	2.6
	HHV7	33.77	0.14	33.73	0.35	33.74	0.37	34.07	0.53	34.62	0.66	33.99	0.38	1.1
5	<i>C. trachomatis</i>	33.48	0.47	34.23	0.57	34.73	0.99	34.30	0.35	34.73	0.39	34.30	0.51	1.5
	Adenovirus	31.27	1.05	32.51	0.60	33.15	0.14	32.53	0.75	34.04	0.41	32.70	1.01	3.1
6	<i>Toxocara</i>	29.96	0.33	29.98	0.26	30.26	0.51	29.95	0.35	30.92	0.43	30.21	0.42	1.4
	<i>T. gondii</i>	30.38	0.39	31.39	0.95	31.09	0.19	30.84	0.73	33.22	1.81	31.38	1.09	3.5
	<i>Acanthamoeba</i>	32.04	0.48	32.04	0.41	32.14	0.41	31.89	0.34	32.69	0.10	32.16	0.31	1.0
7	<i>Candida</i> sp.	33.12	0.71	32.60	0.44	33.13	1.57	32.90	0.31	34.02	1.82	33.15	0.53	1.6
	<i>C. krusei</i>	31.77	1.09	31.90	0.16	32.20	0.58	32.09	0.22	33.47	1.18	32.28	0.68	2.1
	<i>C. glabrata</i>	32.68	0.53	32.16	0.13	32.36	0.66	32.46	0.22	33.64	1.16	32.66	0.58	1.8
8	<i>Fusarium</i>	29.39	0.49	30.37	1.31	29.69	0.51	29.83	0.23	30.90	0.95	30.04	0.60	2.0
	<i>Aspergillus</i>	29.07	0.27	28.96	1.37	29.22	0.63	29.28	0.48	31.36	1.36	29.58	1.00	3.4
9	<i>M. tuberculosis</i>	31.63	0.99	32.10	0.49	32.05	0.55	32.15	0.11	32.49	0.11	32.08	0.30	1.0
	<i>P. acnes</i>	30.53	1.83	31.45	0.58	31.62	0.16	31.59	0.47	32.37	0.73	31.51	0.66	2.1
10	<i>T. pallidum</i>	31.38	0.44	31.22	0.28	31.58	0.44	31.67	0.09	32.86	1.39	31.74	0.65	2.0
11	Fungal 28S	33.37	0.47	33.13	0.59	33.04	0.59	32.73	0.66	34.39	1.26	33.33	0.64	1.9
12	Bacterial 16S	35.81	0.76	35.71	1.15	35.72	0.54	35.96	0.75	35.89	1.51	35.82	0.11	0.3

We added positive controls (all target pathogen DNA of strip) to each well in triplicate over 5 days of testing. The intra- and interassay variability indicated high reproducibility based on the low standard deviation (<1.83) and low coefficient of variation (CV, 0.0%-3.5%).

**Supplementary Table S5.** Linearity tests of strip PCR assay

		Serial dilution of standard DNA (copies/mL, Cq values)					Linear dilution graph		Amplification efficiency	Correlation coefficient
		10 <sup>6</sup>	10 <sup>4</sup>	10 <sup>2</sup>	50	0	Slope	Intercept		
1	GAPDH	18.78	25.60	32.36	33.92	0	-3.47	39.56	0.94	1.00
	HSV1	18.10	24.77	31.57	31.98	0	-3.28	37.85	1.02	1.00
2	HSV2	18.50	25.22	31.64	32.70	0	-3.29	38.28	1.01	1.00
	VZV	18.83	25.87	32.46	33.41	0	-3.38	39.24	0.97	1.00
	HTLV-1	20.22	26.76	33.48	34.10	0	-3.26	39.82	1.02	1.00
3	HHV6	20.13	26.94	33.93	34.01	0	-3.31	40.11	1.00	1.00
	HHV8	18.55	25.36	32.09	33.20	0	-3.40	38.93	0.97	1.00
	EBV	19.80	26.52	32.88	33.87	0	-3.26	39.45	1.02	1.00
4	CMV	18.01	24.80	31.39	33.21	0	-3.46	38.69	0.95	1.00
	HHV7	18.58	25.02	31.82	34.28	0	-3.53	39.51	0.92	1.00
5	<i>C. trachomatis</i>	18.74	25.62	32.87	33.91	0	-3.54	39.90	0.92	1.00
	Adenovirus	18.83	25.82	31.75	33.48	0	-3.31	38.82	1.00	1.00
	<i>Toxocara</i>	17.28	24.36	31.01	29.32	0	-3.03	35.87	1.14	1.00
6	<i>T. gondii</i>	17.54	24.78	31.69	34.40	0	-3.77	40.00	0.84	1.00
	<i>Acanthamoeba</i>	17.97	24.86	31.83	33.70	0	-3.59	39.37	0.90	1.00
	<i>Candida</i> sp.	18.98	25.8	32.53	33.64	0	-3.40	39.38	0.97	1.00
7	<i>C. krusei</i>	18.88	25.74	32.69	32.78	0	-3.32	38.88	1.00	1.00
	<i>C. glabrata</i>	18.91	25.67	32.11	32.89	0	-3.26	38.56	1.03	1.00
8	<i>Fusarium</i>	19.08	25.63	30.63	31.44	0	-2.84	36.43	1.25	1.00
	<i>Aspergillus</i>	17.74	24.39	30.70	31.76	0	-3.24	37.26	1.03	1.00
9	<i>M. tuberculosis</i>	18.51	25.13	31.71	32.32	0	-3.24	38.03	1.03	1.00
	<i>P. acnes</i>	18.13	25.38	32.19	32.36	0	-3.38	38.58	0.98	1.00
10	<i>T. pallidum</i>	16.79	23.58	30.43	33.94	0	-3.77	39.09	0.84	1.00
11	Fungal 28S	18.21	24.84	31.26	33.88	0	-3.49	39.01	0.93	1.00
12	Bacterial 16S	20.36	26.84	34.30	36.20	0	-3.63	41.86	0.89	1.00

We performed linearity tests with DNA from each pathogen at various dilutions (10<sup>6</sup> copies, 10<sup>4</sup> copies, 10<sup>2</sup> copies, 50 copies). We set a limited measurable goal of pathogen concentration for strip PCR as 50 copies. These experiments showed a linear relationship with a good correlation coefficient (1.00) between the Cq value in the range of 50 copies to 10<sup>6</sup> copies of DNA. We believe that the strip PCR assay will make semi-quantitative analysis possible in this range.

**Supplementary Table S6.** Analytical specificity measurements

	Cq value	HSV1	HSV2	VZV	HTLV-1	HHV6	HHV8	EBV	CMV	HHV7	<i>C. trachomatis</i>	Adenovirus	<i>Toxocara</i>	<i>T. gondii</i>	<i>Acanthamoeba</i>	<i>Candida</i> sp.	<i>C. krusei</i>	<i>C. glabrata</i>	<i>Fusarium</i>	<i>Aspergillus</i>	<i>P. acnes</i>	<i>T. pallidum</i>	Bacterial 16S
																Fungal 28S	Fungal 28S	Fungal 28S	Fungal 28S	Fungal 28S			
1	GAPDH	30.02	32.92	31.02	26.01	30.58	24.02	33.50	33.77	22.25	24.35	27.69	32.28	31.91	26.15	31.99	32.64	32.50	32.54	32.54	32.10	31.23	33.83
	TBP	30.23	34.73	31.37	24.01	31.02	23.73	0.00	0.00	21.39	24.41	27.98	0.00	0.00	23.91	0.00	0.00	0.00	0.00	0.00	0.00	31.19	0.00
2	HSV1	20.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HSV2	0.00	26.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VZV	0.00	0.00	20.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	HTLV-1	0.00	0.00	0.00	23.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHV6	0.00	0.00	0.00	0.00	28.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHV8	0.00	0.00	0.00	0.00	0.00	20.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	EBV	0.00	0.00	0.00	0.00	0.00	0.00	29.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	CMV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHV7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	<i>C. trachomatis</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Adenovirus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	<i>Toxocara</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	<i>T. gondii</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	<i>Acanthamoeba</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	<i>Candida</i> sp.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	<i>C. krusei</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.04	19.38	0.00	0.00	0.00	0.00	0.00	0.00
	<i>C. glabrata</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.92	0.00	19.54	0.00	0.00	0.00	0.00	0.00
	<i>Fusarium</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.81	0.00	0.00	0.00
8	<i>Aspergillus</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.16	0.00	0.00
	<i>M. tuberculosis</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	<i>P. acnes</i>	35.05	0.00	0.00	0.00	0.00	0.00	35.24*	0.00	34.43*	33.30*	37.08*	0.00	35.75*	33.39*	36.57*	35.68*	34.94*	33.19*	0.00	17.99	0.00	0.00
10	<i>T. pallidum</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.38	0.00
11	Fungal 28S	0.00	0.00	0.00	0.00	0.00	37.20*	0.00	0.00	38.22*	0.00	0.00	36.21*	0.00	35.55*	22.57	20.75	21.53	44.00*	22.84	0.00	34.27*	39.55*
12	Bacterial 16S	40.15*	41.98*	43.82*	0.00	0.00	42.57*	0.00	42.44*	35.83*	0.00	0.00	40.07*	40.40*	36.25*	42.58*	39.03*	40.23*	42.39*	36.18*	35.10*	36.64*	19.96

We performed analytical specificity measurements with high concentrations of non-targeted pathogens in each well to truly assess specificity. None of the non-targeted pathogens showed positive signal excepting *P. acnes*, bacterial 16S and fungal 28S contaminated from reagents and ocular surface.

\* Cut-off Cq levels: bacterial 16S and fungal 28S, < 35.00; *P. acnes*, < 33.00; others, < 40.00.

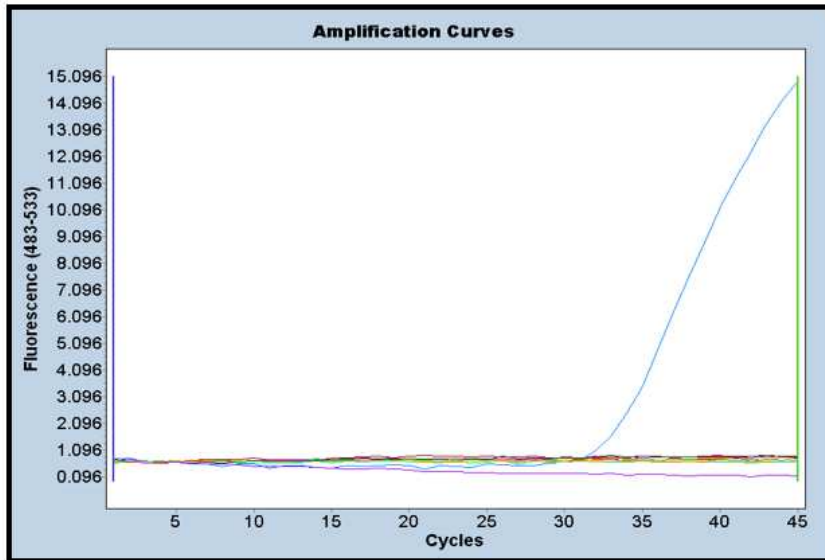
**Supplementary Table S7.** Strip PCR test results in control samples

No.	Patient	Diagnosis	Sample	GAPDH (Cq)	TBP (Cq)	Bacterial 16S (Cq)	Fungal 28S (Cq)	<i>P. acnes</i> (Cq)	Other pathogens
1	74M	Cataract	Aqh	33.58	34.75	40.00	40.00	37.93	N.D.
2	79F	Cataract, ERM	VF	33.57	33.57	40.00	N.D.	N.D.	N.D.
3	77M	Cataract	Aqh	33.58	33.75	40.00	40.00	N.D.	N.D.
4	65M	RD	VF	32.82	32.32	40.00	N.D.	38.82	N.D.
5	67F	POAG	Aqh	32.28	32.28	N.D.	41.66	N.D.	N.D.
6	60F	POAG	Aqh	33.24	33.24	N.D.	N.D.	37.76	N.D.
7	73F	NTG	Aqh	34.79	35.87	N.D.	N.D.	35.27	N.D.
8	68M	XFG	Aqh	34.67	36.85	38.85	N.D.	35.74	N.D.
9	64F	MH	VF	33.75	33.75	N.D.	N.D.	N.D.	N.D.
10	72M	MH	VF	33.92	33.92	N.D.	N.D.	N.D.	N.D.

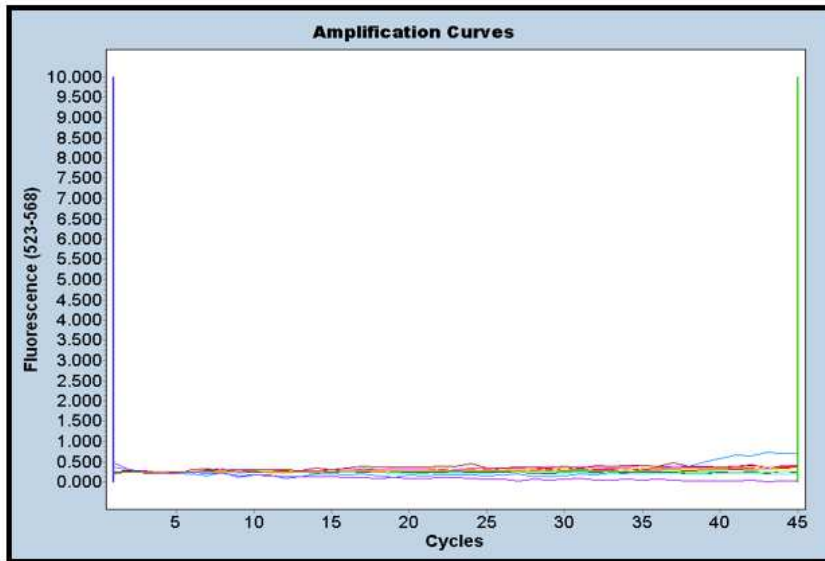
Some control samples (n = 10) were positive for bacterial 16S rRNA (5/10 samples,  $39.77 \pm 0.51$  cycles) and fungal 28S rRNA (3/10 samples,  $40.55 \pm 0.96$  cycles) present in the PCR amplification enzyme as well as *P. acnes* (5/10 samples,  $37.10 \pm 1.52$  cycles). Cut-off Cq values were set based on data from control samples to avoid false-positive results, as follows: 35.00 for bacterial 16S and fungal 28S rDNA; and 33.00 for *P. acnes*.

Aqh, aqueous humor; ERM, epiretinal membrane; MH, macular hole; N.D., not detected; NTG, normal tension glaucoma; POAG, primary open angle glaucoma; RD, retinal detachment; rRNA, ribosomal RNA; VF, vitreous fluid; XFG, exfoliative glaucoma.

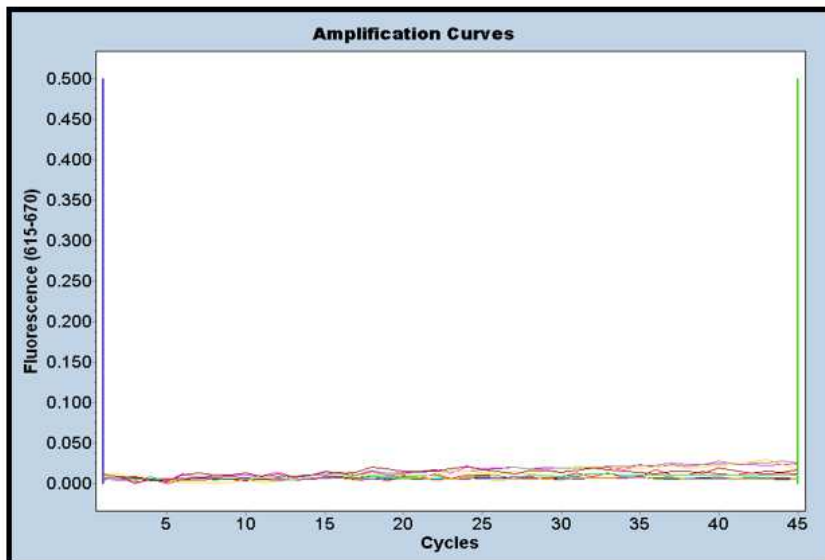
6FAM



HEX



Cy5



### Supplementary Figure S1.

Strip PCR results with negative DNA control (DW) were negative for all items except GAPDH.