

## **SUPPLEMENTAL MATERIAL**

**TABLE S1. PacBio barcoded *tprK* primers used in this study**

**TABLE S2. The long-read sequencing data of the *tprK* gene in the 28 clinical syphilis samples**

**TABLE S3. The obtained full-length *tprK* sequences in the study. (A) from primary syphilis samples (B) from secondary syphilis samples**

Table S1. PacBio barcoded *tprK* primers used in this study

Primer Name	Sequence (5' -> 3')
<i>tprK</i> -F_bc X-1	<b>TAGTGTGCGACTCTGAACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc X-2	<b>TCGTCATACGCTCTAGACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc X-3	<b>GCGCGCGCACTCTCTGACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc X-4	<b>TGTGCTCTTACACAGACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc X-5	<b>TATACGAGATACGTGAACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc X-6	<b>GCTCGACTGTGAGAGAACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc X-7	<b>CGCTAGAGATCTGCTAACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc X-8	<b>TGTACGCTCTCTATATAACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc X-9	<b>AGCACGTGTGTCGACAACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc X-10	<b>TCTCACTGATAGCGTGACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc X-11	<b>TAGCGTGAGAGTGTGACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc X-12	<b>ACACGTGTGCTCTCTCACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc X-13	<b>TCTATGAGCACTCTCGACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc X-14	<b>TCTCACGAGAGCGCACACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -R_bc X-1	<b>TCAGAGTCGCACACTACCATACATCCCTACCAAATCA</b>
<i>tprK</i> -R_bc X-2	<b>CTAGAGCGTATGACGACCATACATCCCTACCAAATCA</b>
<i>tprK</i> -R_bc X-3	<b>CAGAGAGTGCGCGCGCCATACATCCCTACCAAATCA</b>
<i>tprK</i> -R_bc X-4	<b>CTGTGTAGAGAGCACACCATACATCCCTACCAAATCA</b>
<i>tprK</i> -R_bc X-5	<b>TCACGTATCTCGTATAACCATACATCCCTACCAAATCA</b>
<i>tprK</i> -R_bc X-6	<b>TCTCTCACAGTCGAGCCCATACATCCCTACCAAATCA</b>
<i>tprK</i> -R_bc X-7	<b>TAGCAGATCTCTAGCGCCATACATCCCTACCAAATCA</b>
<i>tprK</i> -R_bc X-8	<b>ATATAGAGAGCGTACACCATACATCCCTACCAAATCA</b>
<i>tprK</i> -R_bc X-9	<b>TGTCGACACACGTGCTCCATACATCCCTACCAAATCA</b>
<i>tprK</i> -R_bc X-10	<b>CACGCTATCAGTGAGACCATACATCCCTACCAAATCA</b>
<i>tprK</i> -R_bc X-11	<b>CGACACTCTCACGCTACCATACATCCCTACCAAATCA</b>
<i>tprK</i> -R_bc X-12	<b>GAGAGAGCACACGTGTCCATACATCCCTACCAAATCA</b>
<i>tprK</i> -R_bc X-13	<b>CGAGAGTGCTCATAGACCATACATCCCTACCAAATCA</b>
<i>tprK</i> -R_bc X-14	<b>GTGCGCTCTCGTGAGACCATACATCCCTACCAAATCA</b>
<i>tprK</i> -F_bc S-1	<b>TCATACACACAGATAGACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc S-2	<b>TATAGAGCTCTACATAACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc S-3	<b>GCGCTCTCTCACATACACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc S-4	<b>CACATATCAGAGTGCGACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc S-5	<b>TGACAGTATCACAGTGACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc S-6	<b>TGAGTGAGACATATCAACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc S-7	<b>TATCTGAGCGCGAGCAACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc S-8	<b>TCACGTGCAGATATAGACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc S-9	<b>TCTCATGTGTGAGCTAACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc S-10	<b>GCGTGTGTCGAGTGTAACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc S-11	<b>TCTGTATCTCTATGTGACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc S-12	<b>ACACACTCTATCAGATACCGGGCATGAATTTTCTTT</b>
<i>tprK</i> -F_bc S-13	<b>CGTATACAGTCACGCTACCGGGCATGAATTTTCTTT</b>

<i>tprK-F_bc</i> S-14	<b>CTGTGCTATGTACGCGACCGGGCATGAATTTTCTTT</b>
<i>tprK-R_bc</i> S-1	<b>CTATCTGTGTGTATGACCATAACATCCCTACCAAATCA</b>
<i>tprK-R_bc</i> S-2	<b>TATGTAGAGCTCTATAACCATAACATCCCTACCAAATCA</b>
<i>tprK-R_bc</i> S-3	<b>GTATGTGAGAGAGCGCCCATACATCCCTACCAAATCA</b>
<i>tprK-R_bc</i> S-4	<b>CGCACTCTGATATGTGCCATAACATCCCTACCAAATCA</b>
<i>tprK-R_bc</i> S-5	<b>CACTGTGATACTGTCACCATAACATCCCTACCAAATCA</b>
<i>tprK-R_bc</i> S-6	<b>TGATATGTCTCACTCACCATAACATCCCTACCAAATCA</b>
<i>tprK-R_bc</i> S-7	<b>TGCTCGCGCTCAGATAACCATAACATCCCTACCAAATCA</b>
<i>tprK-R_bc</i> S-8	<b>CTATATCTGCACGTGACCATAACATCCCTACCAAATCA</b>
<i>tprK-R_bc</i> S-9	<b>TAGCTCACACATGAGACCATAACATCCCTACCAAATCA</b>
<i>tprK-R_bc</i> S-10	<b>TACACTCGACACACGCCCATACATCCCTACCAAATCA</b>
<i>tprK-R_bc</i> S-11	<b>CACATAGAGATACAGACCATAACATCCCTACCAAATCA</b>
<i>tprK-R_bc</i> S-12	<b>ATCTGATAGAGTGTGTCCATAACATCCCTACCAAATCA</b>
<i>tprK-R_bc</i> S-13	<b>AGCGTGA CTGTATACGCCATAACATCCCTACCAAATCA</b>
<i>tprK-R_bc</i> S-14	<b>CGCGTACATAGCACAGCCATAACATCCCTACCAAATCA</b>

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Table S2. The long-read sequencing data of the *tprK* gene in the 28 clinical syphilis samples

Sample	Raw reads	Clean reads	Base (nt)	Avg Len (nt)	Effective %
X-1	4546	4474	7126848	1592	98.42
X-2	7152	7020	11178264	1592	98.15
X-3	5551	5497	8754668	1592	99.03
X-4	4959	4896	7794719	1592	98.73
X-5	7268	7129	11354200	1592	98.09
X-6	6889	6684	10606398	1586	97.02
X-7	8076	7350	11525568	1568	91.01
X-8	1154	1086	1724578	1588	94.11
X-9	3165	3095	4926502	1591	97.79
X-10	5784	5677	9031877	1590	98.15
X-11	6392	6138	9729706	1585	96.03
X-12	5523	5414	8627022	1593	98.03
X-13	1471	1394	2215111	1589	94.77
X-14	1377	1321	2098654	1588	95.93
S-1	2163	2088	3323146	1591	96.53
S-2	6355	6296	10018307	1591	99.07
S-3	8002	7602	12099001	1591	95
S-4	7709	7560	11916631	1576	98.07
S-5	5385	5266	8362915	1588	97.79
S-6	6962	6615	10530164	1591	95.02
S-7	2935	2819	4485336	1591	96.05
S-8	2436	2324	3697159	1590	95.4
S-9	6327	6267	9953501	1588	99.05
S-10	4805	4678	7440165	1590	97.36
S-11	6200	5766	9186670	1593	93
S-12	6480	6418	10112690	1575	99.04
S-13	3389	3317	5267864	1588	97.88
S-14	5472	5420	8535148	1574	99.05