

Hare_Ph_v1	1	TACAAATCGGACTAGGATATAGCTGGTTTTCTGCGAAATTTGTA	ATAGCAAAGTGT	TATGAG-ATAA-AATTAG	73
Hare_Ph_v2	1	TACAAATCGGACTAGGATATAGCTGGTTTTCTGCGAAATTTGTA	ATAGCAAAGTGT	TATGAGTTGTAACAATTAG	75
Hare_Ph_v3	1	TACAAATCGGACTAGGATATAGCTGGTTTTCTGCGAAATTTGTA	ATAGCAAAGTGT	TATGAG-ATAA-AATTAG	73
P.ory_v1	1	TACAAATCGGACTAGGATATAGCTGGTTTTCTGCGAAATTTGTA	ATAGCAAAGTGT	TATGTA-ATAA--ATTAG	72
P.ory_v2	1	TACAAATCGGACTAGGATATAGCTGGTTTTCTGCGAAATTTGTA	ATAGCAAAGTGT	TATGTA-ATAA--ATTAG	72
P.ory_ref	1	TACAAATCGGACTAGGATATAGCTGGTTTTCTGCGAAATTTGTA	ATAGCAAAGTGT	TATGTA-ATAA--ATTAG	72
Hare_Ph_v1	74	TAGGTATAGCACTGAATATCTCATTAGAGGGGAGTATGAAATATTTTATCTCGGATATTTAATCTCAGAATGACTA	148		
Hare_Ph_v2	76	TAGGTATAGCACTGAATATCTCTTACAGAGGGGAGTATGAAATATTTTATCTCGGATATTTAATCTCAGAATGACTA	150		
Hare_Ph_v3	74	TAGGTATAGCACTGAATATCTCATTAGAGGGGAGTATGAAATATTTTATCTCGGATATTTAATCTCAGAATGACTA	148		
P.ory_v1	73	TAGGTATAGCACTGAATATTCATTACAGAGGGGAGTACGTAAGTATTTTATCTCGGATATTTAATCTCAGAATGACTA	147		
P.ory_v2	73	TAGGTATAGCACTGAATATTCATTACAGAGGGGAGTACGTAAGTATTTTATCTCGGATATTTAATCTCAGAATGACTA	147		
P.ory_ref	73	TAGGTATAGCACTGAATATTCATTACAGAGGGGAGTACGTAAGTATTTTATCTCGGATATTTAATCTCAGAATGACTA	147		
Hare_Ph_v1	149	ATTTAATATAAAATAAATGGACTTCTTGCGATTAAGGTGGGAAGTCAAAAGGGAAACAGCCCAAGAACAGAATGAA	223		
Hare_Ph_v2	151	ATTGGAGTAATAAAACAAATGGACTTCTTGCGATTAAGGTGGGAAGTCAAAAGGGAAACAGCCCAAGAACAGATGAA	225		
Hare_Ph_v3	149	ATTTAATATAAAATAAATGGACTTCTTGCGATTAAGGTGGGAAGTCAAAAGGGAAACAGCCCAAGAACAGAATGAA	223		
P.ory_v1	148	ATTTATAAGATAAAATGGATGGACTTTTTCGCGAAGGTGGGAAGTCAAGAGGGAAACAGCCCAAGAACAGAATGAA	222		
P.ory_v2	148	ATTTATAAGATAAAATCGATGGACTTTTTCGCGAAGGTGGGAAGTCAAGAGGGAAACAGCCCAAGAACAGAATGAA	222		
P.ory_ref	148	ATTTATAAGATAAAATGGATGGACTTTTTCGCGAAGGTGGGAAGTCAAGAGGGAAACAGCCCAAGAACAGAATGAA	222		
Hare_Ph_v1	224	AGCTCCGGAATTAATTTAAGTGAAAGAAAGAAAGGTGATTTCTCAGTGACAGTCAAGAAGTGGGCTTGGAACACAG	298		
Hare_Ph_v2	226	AGCTCCAAATTAATTTGAGTGAAAGAAAGAAAGGTGATTTCTCGGGGACAGTCAAGAAGTGGGCTTGGAACACAG	300		
Hare_Ph_v3	224	AGCTCCGGAATTAATTTAAGTGAAAGAAAGAAAGGTGATTTCTCAGTGACAGTCAAGAAGTGGGCTTGGAACACAG	298		
P.ory_v1	223	AGCTCCGGAATTAATTTGAGTGAAAGAAAGAAAGGTGTTTTTTCAGAGACAGTCAAGAAGTGGGCTTGGAACACAG	297		
P.ory_v2	223	AGCTCCTGAATTAATTTGAGTGAAAGAAAGAAAGGTGTTTTTTCAGAGACAGTCAAGAAGTGGGCTTGGAACACAG	297		
P.ory_ref	223	AGCTCCGGAATTAATTTGAGTGAAAGAAAGAAAGGTGTTTTTTCAGAGACAGTCAAGAAGTGGGCTTGGAACACAG	297		
Hare_Ph_v1	299	CCATCTTTTAAAGAACACGTAATAAGTGCAATGATCTAGGAGAGATTGCGTCGAAAAATACAGGATCTGAAAATTTA	373		
Hare_Ph_v2	301	CCATCTTTTAAAGAACACGTAATAGTGCAATGATCTGATGAGAGATTGCGTCGAAAAATACAGGATCTGAAAATTTA	375		
Hare_Ph_v3	299	CCATCTTTTAAAGAACACGTAATAAGTGCAATGATCTAGGAGAGATTGCGTCGAAAAATACAGGATCTGAAAATTTA	373		
P.ory_v1	298	CCATCTTTTAAAGAACACGTAATAGTGCAATGATCTATGAAAGATTGCGCCAAAAATACAGGATCT-AAAATTTG	371		
P.ory_v2	298	CCATCTTTTAAAGAACACGTAATAGTGCAATGATCTATGAAAGATTGCGCCAAAAATACAGGATCT-AAAATTTG	371		
P.ory_ref	298	CCATCTTTTAAAGAACACGTAATAGTGCAATGATCTATGAAAGATTGCGCCAAAAATACAGGATCT-AAAATTTG	371		
Hare_Ph_v1	374	TGCTTAAATCTGTCTAATAAGGAAGTTAAGAAGGAATTAAATTTTC-TTGTGGGTAGCAGAACATTTAGTAACCTAGA	447		
Hare_Ph_v2	376	TGCTTAAATCTGTCTAGAAATGAATTTTAGTACTTCCATAAAATTCATTGTGGGTAGCAGAACATTTAGTAACCTAGA	450		
Hare_Ph_v3	374	TGCTTAAATCTGTCTAATAAGGAAGTTAAGAAGGAATTAAATTTTC-TTGTGGGTAGCAGAACATTTAGTAACCTAGA	447		
P.ory_v1	372	TGCTTAAATCTGTCTGTGAAGAAATGAA-----TTGAATTTCTTTATGGGTAGCAGAACATTTAGTATCTAAA	439		
P.ory_v2	372	TGCTTAAATCTGTCTGTGAAGAAATGAA-----TTGAATTTCTTTATGGGTAGCAGAACATTTAGTATCTAAA	439		
P.ory_ref	372	TGCTTAAATCTGTCTGTGAAGAAATGAA-----TTGAATTTCTTTATGGGTAGCAGAACATTTAGTATCTAAA	439		
Hare_Ph_v1	448	AGAAGGATAATCTTAGATTATTTGGATAGAACTAAAGAGAGAATGCTGACATGAG	502		
Hare_Ph_v2	451	AGAAGAATAATCTTTGATTATTTGGATAGAACTAAAGAGAGAATGCTGACATGAG	505		
Hare_Ph_v3	448	AGAAGGATAATCTTAGATTATTTGGATAGAAGCTAAAGAGAGAATGCTGACATGAG	502		
P.ory_v1	440	AGAAGAATAATCTTTGATTGTTTGGATAGAACTAAAGAGAGAATGCTGACATGAG	494		
P.ory_v2	440	AGAAGAATAATCTTTGATTGTTTGGATAGAACTAAAGAGAGAATGCTGACATGAG	494		
P.ory_ref	440	AGAAGAATAATCTTTGATTGTTTGGATAGAACTAAAGAGAGAATGCTGACATGAG	494		

Supplemental Figure S4. Variation of mitochondrial large-subunit rRNA (mtLSU) sequences of *Pneumocystis* variants in hares and rabbits aligned with *P. oryctolagi* reference sequence (P.ory_ref, from Michigan, USA. GenBank accession no. MT726213). Identical nucleotides among multiple variants are highlighted in dark shadow. The 3 variants of *P. sp. 'townsendii'* from hares are represented by Hare_Ph_v1 to Hare_Ph_v3. The 2 variants of *P. oryctolagi* are represented by P.ory_v1 and P.ory_v2. All sequences determined in this study have been deposited into GenBank with accession nos. available from Table S6.