

Supplementary Table S1. Accession numbers and exclusion criteria for the 25 *Hyalomma anatolicum* COI sequences removed from the initial dataset of 96 sequences prior to phylogenetic analyses.

Accession	Country	Explicit exclusion criterion	Evidence
KM235701.1	Iraq	Duplicate sequence	Identical to retained KM235703.1
KM235702.1	Iraq	Duplicate sequence	Identical to retained KM235703.1
KM235710.1	Iraq	Duplicate / near-identical shorter sequence	0 differences with retained KM235703.1 in overlapping region; 1 bp shorter at 3' end
KM235711.1	Iraq	Duplicate / near-identical shorter sequence	Identical to KM235710.1; near-identical to retained KM235703.1
MH511170.1	Iraq	Duplicate sequence	Identical to retained MG551988.1 (part of a 5-sequence identical group)
MH511171.1	Iraq	Duplicate sequence	Identical to retained MG551988.1
MH511172.1	Iraq	Duplicate sequence	Identical to retained MG551988.1
MH511174.1	Iraq	Duplicate sequence	Identical to retained MG551988.1
MZ411452.1	Iraq	Duplicate sequence	Identical to retained MZ411461.1 (part of a 4-sequence identical group)
MZ411453.1	Iraq	Excessively short / insufficient overlap for alignment	Only partial downstream coverage (391 bp vs 405 bp retained homologs)
MZ411456.1	Iraq	Excessively short / insufficient overlap for alignment	Identical to MZ411453.1; partial downstream coverage
MZ411457.1	Iraq	Excessively short / insufficient overlap for alignment	Partial downstream coverage only
MZ411458.1	Iraq	Excessively short / insufficient overlap for alignment	Partial downstream coverage only
MZ411459.1	Iraq	Duplicate sequence	Identical to retained MZ411461.1
MZ411460.1	Iraq	Duplicate sequence	Identical to retained MZ411461.1
KU130580.1	Pakistan	Duplicate sequence	Identical to retained KU130579.1 (part of a 3-sequence identical group)
KU130581.1	Pakistan	Duplicate sequence	Identical to retained KU130579.1
MK462203.1	Pakistan	Duplicate sequence	Identical to retained PV262393.1
OQ380635.1	Pakistan	Duplicate sequence	Identical to retained MT800311.1 (part of a 4-sequence identical group)
OQ380644.1	Pakistan	Duplicate sequence	Identical to retained MT800311.1
OQ380647.1	Pakistan	Duplicate sequence	Identical to retained MT800311.1
OQ380648.1	Pakistan	Duplicate sequence	Identical to retained OQ380653.1
PV452856.1	Pakistan	Duplicate sequence	Identical to retained PV452859.1 (part of a 4-sequence identical group)
PV452857.1	Pakistan	Duplicate sequence	Identical to retained PV452859.1
PV452858.1	Pakistan	Duplicate sequence	Identical to retained PV452859.1