

Supplementary table S1. Summary of Blast results (based on max score).

<b>16S</b>	<b>GB accession</b>	<b>Species</b>	<b>Score (Bits)</b>	<b>E (value)</b>	<b>Identities, Gaps</b>
RMNH22579_Rotterdam_1972	AP006470.1	Balaenoptera borealis	130	4e-27	Identities = 70/70 (100%), Gaps = 0/70 (0%)
RMNH31164_Monnikendam_1811	MF409248.1	Balaenoptera borealis	132	1e-27	Identities = 71/71 (100%), Gaps = 0/71 (0%)
RMNH31166_Pekalongan_1864	AP006470.1	Balaenoptera borealis	130	4e-27	Identities = 70/70 (100%), Gaps = 0/70 (0%)
RMNH41459_Texel_2005	AP006468.1	Balaenoptera acutorostrata	132	1e-27	Identities = 71/71 (100%), Gaps = 0/71 (0%)
St118009_Doggersbank_1963	AP006468.1	Balaenoptera acutorostrata	132	1e-27	Identities = 71/71 (100%), Gaps = 0/71 (0%)
<b>COI</b>					
RMNH22579_Rotterdam_1972	MF409249.1	Balaenoptera borealis	143	6e-31	Identities = 77/77 (100%), Gaps = 0/77 (0%)
RMNH31164_Monnikendam_1811	MF409249.1	Balaenoptera borealis	143	6e-31	Identities = 77/77 (100%), Gaps = 0/77 (0%)
RMNH31166_Pekalongan_1864	MF409249.1	Balaenoptera borealis	143	6e-31	Identities = 77/77 (100%), Gaps = 0/77 (0%)
RMNH41459_Texel_2005	KF281608.1	Balaenoptera acutorostrata	143	6e-31	Identities = 77/77 (100%), Gaps = 0/77 (0%)
RMNH41465_Goeree_2006	MF409243.1	Balaenoptera physalus	143	6e-31	Identities = 77/77 (100%), Gaps = 0/77 (0%)
<b>CR</b>					
RMNH22579_Rotterdam_1972	AY822114.1	Balaenoptera borealis	187	4e-44	Identities = 101/101 (100%), Gaps = 0/101 (0%)
RMNH31164_Monnikendam_1811	MF409249.1	Balaenoptera borealis	187	4e-44	Identities = 101/101 (100%), Gaps = 0/101 (0%)
RMNH41459_Texel_2005	JN185219.1	Balaenoptera acutorostrata	187	4e-44	Identities = 101/101 (100%), Gaps = 0/101 (0%)
RMNH41465_Goeree_2006	KC572827.1	Balaenoptera physalus	182	2e-42	Identities = 100/101 (99%), Gaps = 0/101 (0%)
<b>ND4L</b>					
RMNH22579_Rotterdam_1972	AP006470.1	Balaenoptera borealis	102	5e-19	Identities = 55/55 (100%), Gaps = 0/55 (0%)
RMNH31164_Monnikendam_1811	MF409249.1	Balaenoptera borealis	102	5e-19	Identities = 55/55 (100%), Gaps = 0/55 (0%)
RMNH31166_Pekalongan_1864	AP006470.1	Balaenoptera borealis	102	5e-19	Identities = 55/55 (100%), Gaps = 0/55 (0%)
<b>CB</b>					
RMNH22579_Rotterdam_1972	HM034302.1	Balaenoptera borealis	165	2e-37	Identities = 91/92 (99%), Gaps = 0/92 (0%)
RMNH31164_Monnikendam_1811	MF409249.1	Balaenoptera borealis	171	4e-39	Identities = 92/92 (100%), Gaps = 0/92 (0%)

Supplementary table S2. Sequence similarity values (in percentages).

16S	B.acutorostrata_NC_005271	B.bonaerensis_NC_006926	B.borealis_NC_006929	B.brydei_NC_006928	B.edeni_NC_007938	B.musculus_NC_001601	B.omurai_NC_007937	B.physalus_KC572782	M.novaeangliae_NC_006927	Average P-distance 16S
B.acutorostrata_NC_005271										
B.bonaerensis_NC_006926	94.4									
B.borealis_NC_006929	83.1	85.9								
B.brydei_NC_006928	81.7	80.3	90							
B.edeni_NC_007938	81.7	84.5	94.3	90						
B.musculus_NC_001601	85.9	88.7	85.9	78.9	83.1					
B.omurai_NC_007937	84.5	87.3	88.7	84.5	88.7	84.5				
B.physalus_KC572782	85.9	87.3	88.7	90.1	85.9	84.5	85.9			86.2
M.novaeangliae_NC_006927	87.3	88.7	88.7	84.5	85.9	90.1	84.5	90.1		
CytB	B.acutorostrata_NC_005271	B.bonaerensis_NC_006926	B.borealis_NC_006929	B.brydei_NC_006928	B.edeni_NC_007938	B.musculus_NC_001601	B.omurai_NC_007937	B.physalus_KC572782	M.novaeangliae_NC_006927	Average P-distance CytB
B.acutorostrata_NC_005271										
B.bonaerensis_NC_006926	91.3									
B.borealis_NC_006929	84.8	89.1								
B.brydei_NC_006928	83.7	88	92.4							
B.edeni_NC_007938	84.8	89.1	93.5	94.6						
B.musculus_NC_001601	84.8	89.1	95.7	90.2	91.3					
B.omurai_NC_007937	84.8	91.3	93.5	88	89.1	91.3				
B.physalus_KC572782	87	89.1	93.5	92.4	93.5	91.3	89.1			89.9
M.novaeangliae_NC_006927	87	91.3	93.5	96.7	95.7	91.3	89.1	95.7		
COI	B.acutorostrata_NC_005271	B.bonaerensis_NC_006926	B.borealis_NC_006929	B.brydei_NC_006928	B.edeni_NC_007938	B.musculus_NC_001601	B.omurai_NC_007937	B.physalus_KC572782	M.novaeangliae_NC_006927	Average P-distance COI
B.acutorostrata_NC_005271										
B.bonaerensis_NC_006926	100									
B.borealis_NC_006929	90.9	90.9								
B.brydei_NC_006928	89.6	89.6	87							
B.edeni_NC_007938	90.9	90.9	92.2	92.2						
B.musculus_NC_001601	94.8	94.8	96.1	89.6	93.5					
B.omurai_NC_007937	88.3	88.3	93.5	89.6	92.2	93.5				
B.physalus_KC572782	90.9	90.9	94.8	88.3	92.2	96.1	94.8			92.0
M.novaeangliae_NC_006927	90.9	90.9	88.3	84.4	90.9	90.9	85.7	89.6		
D-loop	B.acutorostrata_NC_005271	B.bonaerensis_NC_006926	B.borealis_NC_006929	B.brydei_NC_006928	B.edeni_NC_007938	B.musculus_NC_001601	B.omurai_NC_007937	B.physalus_KC572782	M.novaeangliae_NC_006927	Average P-distance D-loop
B.acutorostrata_NC_005271										
B.bonaerensis_NC_006926	82.2									
B.borealis_NC_006929	84.2	81.2								
B.brydei_NC_006928	84.2	76.2	92.1							
B.edeni_NC_007938	85.1	75.2	89.1	87.1						
B.musculus_NC_001601	85.1	80.2	86.1	85.1	88.1					
B.omurai_NC_007937	84.2	79.2	91.1	89.1	91.1	92.1				
B.physalus_KC572782	85.1	77.2	88.1	89.1	86.1	92.1	92.1			85.6
M.novaeangliae_NC_006927	77.2	73.3	81.2	83.2	82.2	88.1	86.1	91.1		
ND4L	B.acutorostrata_NC_005271	B.bonaerensis_NC_006926	B.borealis_NC_006929	B.brydei_NC_006928	B.edeni_NC_007938	B.musculus_NC_001601	B.omurai_NC_007937	B.physalus_KC572782	M.novaeangliae_NC_006927	Average P-distance ND4L
B.acutorostrata_NC_005271										
B.bonaerensis_NC_006926	90.9									
B.borealis_NC_006929	83.6	81.8								
B.brydei_NC_006928	78.2	83.6	90.9							
B.edeni_NC_007938	83.6	85.5	96.4	94.5						
B.musculus_NC_001601	81.8	83.6	83.6	85.5	87.3					
B.omurai_NC_007937	85.5	87.3	90.9	89.1	94.5	92.7				
B.physalus_KC572782	92.7	90.9	87.3	85.5	90.9	89.1	92.7			87.9
M.novaeangliae_NC_006927	89.1	98.2	83.6	85.5	87.3	85.5	89.1	92.7		
Marker	Average P-distance within Balaenoptera (i.e. excluding Megaptera) per marker:									
D-loop	85.6									
16S	86.2									
ND4L	87.9									
CytB	89.9									
COI	92.0									
Overall average P-distance (ie. all markers) within Balaenoptera (i.e. excluding Megaptera):										
88.3										

Supplementary table S3. GenBank accession numbers.

3_Balaenoptera_ND4L.sqn B_borealis_RMNH.MAM.31164_ND4L	MK965198
3_Balaenoptera_ND4L.sqn B_borealis_RMNH.MAM.31166_ND4L	MK965199
3_Balaenoptera_ND4L.sqn B_borealis_RMNH.MAM.22579_ND4L	MK965200
5_Balaenoptera_CR.sqn B_borealis_RMNH.MAM.31164_CR	MK965201
5_Balaenoptera_CR.sqn B_borealis_RMNH.MAM.22579_CR	MK965202
5_Balaenoptera_CR.sqn B_acutorostrata_RMNH.MAM.41459_CR	MK965203
5_Balaenoptera_CR.sqn B_physalus_RMNH.MAM.41465_CR	MK965204
2_Balaenoptera_COI.sqn B_borealis_RMNH.MAM.31164_COI	MK965205
2_Balaenoptera_COI.sqn B_borealis_RMNH.MAM.31166_COI	MK965206
2_Balaenoptera_COI.sqn B_borealis_RMNH.MAM.22579_COI	MK965207
2_Balaenoptera_COI.sqn B_acutorostrata_RMNH.MAM.41459_COI	MK965208
2_Balaenoptera_COI.sqn B_physalus_RMNH.MAM.41465_COI	MK965209
1_Balaenoptera_16S.sqn B_borealis_RMNH.MAM.31164_16S	MK965210
1_Balaenoptera_16S.sqn B_borealis_RMNH.MAM.31166_16S	MK965211
1_Balaenoptera_16S.sqn B_acutorostrata_RMNH.MAM_16S	MK965212
1_Balaenoptera_16S.sqn B_borealis_RMNH.MAM.22579_16S	MK965213
1_Balaenoptera_16S.sqn B_acutorostrata_RMNH.MAM.41459_16S	MK965214
4_Balaenoptera_CYTB.sqn B_borealis_RMNH.MAM.31164_CYTB	MK965215
4_Balaenoptera_CYTB.sqn B_borealis_RMNH.MAM.22579_CYTB	MK965216