

% sequence similarity of common OMPs found in NmB and Ng strains

NEIS#	Protein name	Amino acid sequence similarity		Amino acid sequence similarity within Ng (%)		DNA sequence similarity		DNA sequence similarity within Ng (%)			
		Range	Mean ± SD	Range	Mean ± SD	Range	Mean ± SD	Range	Mean ± SD		
NEIS2109	NhbA	67.5–88	72.8 ± 5.2	78.3–100	96.8 ± 5.0	72.9–88.2	80.4 ± 3.7	84.7–99.9	97.9 ± 3.6		
NEIS1183	GNA1030	90.9–93.5	92.2 ± 0.9	98.4–100	99.1 ± 0.5	93.8–94.8	94.2 ± 0.3	99.3–99.8	99.6 ± 0.2		
NEIS2020	PorB	66.2–94.2	69.7 ± 2.9	65.2–100	91.3 ± 6.2	74.1–96.6	79 ± 2.8	68.7–99.9	94.7 ± 4.5		
NEIS1963	FetA	90.5–95	92.8 ± 1.4	89.5–100	96.4 ± 1.9	89.4–95.6	93.6 ± 1.1	91.6–99.9	97.2 ± 1.4		
NEIS0408	PliQ	89.3–97.2	93.1 ± 2.3	95.7–100	99.2 ± 0.6	77.9–94.2	83.3 ± 6.8	81.5–99.9	99.1 ± 2.5		
NEIS0173	Omp85 (BamA)	95–95.8	95.2 ± 0.2	99–100	99.6 ± 0.2	94.2–95.9	95.1 ± 0.5	99.2–99.9	99.6 ± 0.2		
NEIS1783	RmpM	92.6–93.6	93.2 ± 0.3	98.7–100	99.4 ± 0.3	94.7–98.2	95.8 ± 1.0	98.9–99.8	99.6 ± 0.2		
NEIS2198	OpcA	44.8–47.1	45.4 ± 0.6	97.7–100	99 ± 0.5	34.4–38.5	35.7 ± 0.7	98.6–99.9	99.4 ± 0.2		
NEIS0612	NspA	90.8–95.7	94 ± 0.9	92–100	98.2 ± 1.5	67.3–97.3	94.5 ± 6.9	93.0–99.9	98.7 ± 1.6		
NEIS1632	MtrE	93–97.5	94.9 ± 1.7	95–100	99.1 ± 1.3	91.4–95.7	93.2 ± 1.6	95.7–99.9	99.2 ± 1.2		
NEIS0586	MafB1	79–80.9	79.5 ± 0.4	96–100	99.2 ± 1.1	76.8–80.2	77.8 ± 1.3	97.1–99.9	99.3 ± 0.8		
NEIS1917	MetQ	96.5–99.3	96.9 ± 0.7	97.2–100	99.6 ± 0.9	96.5–99.3	96.9 ± 0.9	97.2–99.9	99.6 ± 0.9		
NEIS0653	ComL	98.1–99.6	98.4 ± 0.4	97.8–100	99.4 ± 0.6	92–97.3	94.7 ± 2.4	94.4–99.8	99 ± 1.7		
NEIS1687	OM phospholipase A precursor	98.4–98.9	98.6 ± 0.1	99.2–99.7	99.5 ± 0.2	98.8–99	98.8 ± 0.1	99.7–99.9	99.8 ± 0.1		
NEIS1468	LbpA	86.3–96.3	95.5 ± 1.8	87.9–100	98.3 ± 2.4	88.5–97	95.4 ± 1.4	90.0–99.9	97.8 ± 2.2		
NEIS1487	Peptidylprolyl isomerase	96.7–99.2	97.3 ± 0.6	96–100	98.9 ± 1.0	96.6–99.5	97 ± 0.7	96.2–99.8	99.2 ± 1.1		
hmbR	HmbR	89.5–89.6	89.5 ± 0.1	100–100	100 ± 0.0	87.2–88.1	87.5 ± 0.4	100–100	100 ± 0.0		
NEIS0566	LoIB	98.1–98.5	98.4 ± 0.2	99–100	99.7 ± 0.3	96.8–98.7	97.7 ± 0.8	99.4–99.8	99.6 ± 0.1		
NEIS1418	NlpD	90.3–94	93.1 ± 0.7	95.4–100	99.2 ± 0.7	63–95.3	87.5 ± 8.3	68.6–99.9	99.4 ± 1.4		
NEIS1462	H.8 OMP	95.1–98.3	97.8 ± 0.8	88.6–100	97.6 ± 3.8	91.4–96.7	95.8 ± 1.3	88.8–99.8	97.5 ± 4.1		
NEIS1933	VacJ-related protein	94.9–95.6	95.3 ± 0.2	95.6–100	98.4 ± 1.6	93.7–95.5	95 ± 0.5	94.9–99.8	98.4 ± 2.1		
NEIS0388	Ferric siderophore receptor protein	74.9–97.2	92.9 ± 7.5	76.6–100	94.3 ± 8.8	78.2–97.6	93.7 ± 6.3	81.0–99.9	95.4 ± 7.0		
NEIS1813	OstA	93.2–94.3	93.5 ± 0.4	98.9–100	99.2 ± 0.3	88.9–89.4	89.1 ± 0.2	99.4–99.8	99.6 ± 0.1		
NEIS1691	TbpB	60.8–86.3	67.3 ± 5.3	58.9–100	75.9 ± 7.7	45.6–91.6	72.2 ± 10.0	44.0–99.9	80.6 ± 11.3		
NEIS1549	AniA	83.4–92.3	84.4 ± 2.4	95.8–100	99.2 ± 0.6	84–94.7	90.3 ± 3.6	94.2–99.9	99 ± 0.9		
NEIS1205	Ape1	94.5–97.4	95.3 ± 0.6	95.2–100	98.3 ± 1.3	95.4–98.1	96 ± 0.6	96.2–99.9	98.9 ± 1.1		
NEIS2124	Lipoprotein	98.6–99.3	98.9 ± 0.3	98.6–100	99.1 ± 0.4	98–98.6	98.1 ± 0.2	99.5–99.7	99.6 ± 0.1		
NEIS1063	Putative pp protein	96.3–96.7	96.6 ± 0.2	99.1–100	99.7 ± 0.3	96.3–96.7	96.4 ± 0.1	99.5–99.8	99.7 ± 0.1		
NEIS1066	Putative pp protein	93.3–94.1	93.8 ± 0.3	98.7–100	99.4 ± 0.3	94.8–95	94.9 ± 0.1	99.6–99.8	99.7 ± 0.1		
NEIS0275	Putative OM solvent tolerance protein	89.1–89.9	89.5 ± 0.2	92.6–100	99.4 ± 1.1	89.5–92	91.7 ± 0.3	92.5–99.9	99.5 ± 1.1		
NEIS0944	Putative OM receptor protein	96.7–97.3	96.9 ± 0.1	99.4–100	99.7 ± 0.1	94.4–95.7	94.9 ± 0.5	99.2–99.9	99.6 ± 0.2		
NEIS1428	Putative OM substrate binding protein	94.8–96.5	95.8 ± 0.4	97–100	98.6 ± 0.6	96.5–97.6	97.1 ± 0.3	97.7–100	99 ± 0.5		
NEIS0739	putative amino acid permease substrate-binding protein	97.1–98.5	97.8 ± 0.3	98.6–100	99.4 ± 0.4	94.6–95.4	94.9 ± 0.2	98.9–99.8	99.6 ± 0.2		
NEIS1920	Putative transglycosylase	95.9–97.8	97.4 ± 0.3	96.3–100	99.1 ± 0.6	95.4–97.8	97 ± 0.4	95.6–99.9	99 ± 0.6		
NEIS2112	Putative OMP	98.4–99.1	98.9 ± 0.2	98.1–100	99.5 ± 0.4	96.2–98	97.3 ± 0.7	97.4–99.9	99.5 ± 0.6		
NEIS0261	Putative pp protein	86.2–97	93.5 ± 2.8	85.4–100	97.1 ± 3.7	77.1–97.5	89.2 ± 6.4	63.4–99.8	93.4 ± 10.7		
NEIS0504	Putative thiamine biosynthesis protein	96–96.3	96.2 ± 0.1	99.4–100	99.8 ± 0.2	95.2–95.8	95.5 ± 0.2	99.6–99.9	99.7 ± 0.1		
NEIS0630	Putative pp protein	92.1–92.6	92.2 ± 0.2	99–100	99.4 ± 0.3	90.4–94.6	92 ± 1.7	99.3–99.8	99.6 ± 0.1		
NEIS0729	putative secreted protein	91.4–96.3	93.9 ± 1.3	92.9–100	98 ± 1.9	92.2–97.1	95.3 ± 1.2	96.2–99.7	98.9 ± 1.1		
NEIS1304	Putative membrane lipoprotein	96.7–97.2	97.1 ± 0.2	99.5–100	99.8 ± 0.3	96.4–96.9	96.6 ± 0.2	99.6–99.8	99.6 ± 0.1		
NEIS1195	Putative peptidyl-prolyl cis-trans isomerase A	92.4–94.5	93.6 ± 0.6	97.3–100	99.1 ± 0.7	92.1–94.4	93.6 ± 0.6	97–99.8	99 ± 0.7		
NEIS1935	Putative pp transport protein	91.8–92.8	92.2 ± 0.4	98.5–100	99.1 ± 0.4	90.9–92.3	91.5 ± 0.5	99.3–99.8	99.6 ± 0.2		
NEIS0196	Putative OM lipoprotein	92.8–95.2	93.4 ± 0.9	91.2–99.2	95.8 ± 3.6	86.5–98.4	91.8 ± 4.3	86–99.7	96.2 ± 5.9		
NEIS1084	Putative pp protein	93.1–95	93.7 ± 0.6	97–100	98.3 ± 0.8	92.8–95	93.9 ± 0.7	98.7–99.6	99.2 ± 0.3		
NEIS1125	Putative pp protein	95.3–97	95.8 ± 0.6	98.8–100	99.1 ± 0.3	92.8–94.9	93.9 ± 0.7	99.4–99.8	99.6 ± 0.1		
NEIS1172	Putative pp protein	92.7–99.7	93.2 ± 1.1	92.7–100	99.1 ± 1.4	92–99.9	92.6 ± 1.1	92.2–99.9	99.1 ± 1.6		
Amino acid sequence similarity		DNA sequence similarity		Amino acid sequence similarity		DNA sequence similarity		Amino acid sequence similarity			
Other 3 NmB to Ng (%)		Other 3 NmB to Ng (%)		Other 3 NmB to Ng (%)		Other 3 NmB to Ng (%)		Other 3 NmB to Ng (%)			
Range	Mean ± SD	Range	Mean ± SD	Range	Mean ± SD	Range	Mean ± SD	Range	Mean ± SD		
67.8–88.2	73.7 ± 5.6	72.9–87.6	80.8 ± 3.9	90.9–93.5	92.1 ± 0.9	94–94.8	94.3 ± 0.3	66.2–94.5	70 ± 2.8	74.1–96.6	78.9 ± 2.7
88.6–94.6	92.2 ± 1.0	89.4–95.3	93.5 ± 1.1	88.3–96.6	92.6 ± 2.4	77.9–93.2	82.7 ± 6.4	95–96.3	95.4 ± 0.3	94.2–95.9	94.9 ± 0.5
93.8–97	95.3 ± 1.2	95.1–97.8	95.7 ± 0.6	44.1–46.5	45.2 ± 0.8	34.4–37.8	35.6 ± 0.5	90.8–95.7	94 ± 0.9	67.7–97.3	94.6 ± 6.8
93–97.7	94.6 ± 1.8	92–95.7	93.5 ± 1.4	78.6–80.1	79.2 ± 0.4	76.8–79.9	77.4 ± 1.1	97.6–99.6	97.8 ± 0.6	97.2–99.1	97.8 ± 0.7
95.9–96.2	96 ± 0.2	92–93	92.3 ± 0.2	98.1–98.6	98.4 ± 0.2	98.8–99	98.9 ± 0.1	83.9–97.1	95 ± 2.3	88.5–96.9	95.3 ± 1.4
96.7–99.2	97.3 ± 0.6	96.6–99.3	97 ± 0.6	89.6–90.3	89.9 ± 0.3	87.2–88.1	87.6 ± 0.5	98.1–99	98.5 ± 0.3	96.8–97.2	96.9 ± 0.2
98.1–98.6	98.4 ± 0.2	98.8–99	98.9 ± 0.1	54.9–70	62.8 ± 6.0	76.6–95.2	82 ± 7.1	95.1–98.3	97.6 ± 1.0	91.4–96.7	95.9 ± 1.4
94.8–98.2	97.4 ± 0.6	89.6–94.7	93.8 ± 0.8	94.9–95.6	95.3 ± 0.2	94–95.5	95.2 ± 0.5	74.1–96.5	91.8 ± 8.0	78.2–97.1	93.4 ± 6.3
94.2–98.4	95.2 ± 0.9	95.4–98.1	95.8 ± 0.6	98.6–99.3	98.9 ± 0.3	98.2–98.6	98.3 ± 0.2	59.1–87.3	67.3 ± 5.5	45.6–92.2	73.2 ± 10.1
98.6–99.3	98.9 ± 0.3	98.2–98.6	98.3 ± 0.2	96.3–96.7	96.6 ± 0.2	96.3–96.6	96.3 ± 0.1	100–100	100 ± 0.0	100–100	100 ± 0.0
100–100	100 ± 0.0	100–100	100 ± 0.0	88.7–89.4	89 ± 0.2	90.8–91.8	91.6 ± 0.2	96.1–96.7	96.3 ± 0.1	94.4–94.8	94.6 ± 0.1
95–96.7	95.9 ± 0.4	96.5–97.6	97.1 ± 0.3	95.9–98.5	97.8 ± 0.3	94.6–95.4	94.9 ± 0.2	95.8–97.7	97 ± 0.3	95.4–97.4	96.8 ± 0.3
97.2–98.6	97.7 ± 0.5	96.2–97.3	96.3 ± 0.3	85.8–96.9	93.9 ± 2.8	77.1–97.5	88.1 ± 6.5	95.8–97.7	97.7 ± 0.5	96.2–97.3	96.3 ± 0.3
96.3–96.5	96.4 ± 0.1	95.6–95.8	95.6 ± 0.1	90.6–91.6	91 ± 0.3	90.4–91.6	90.7 ± 0.3	91.4–97.8	95.8 ± 1.6	92.2–97	95.5 ± 1.3
91.4–97.8	95.8 ± 1.6	92.2–97	95.5 ± 1.3	96.7–97.2	97.1 ± 0.2	96.8–96.9	96.7 ± 0.1	96.7–97.2	97.1 ± 0.2	96.8–96.9	96.7 ± 0.1
100–100	100 ± 0.0	100–100	100 ± 0.0	91.8–92.8	92.2 ± 0.4	91.9–92.3	92 ± 0.1	89.6–98.4	94.1 ± 3.2	86.5–98.4	92.6 ± 4.6
91.1–93	91.7 ± 0.6	92.8–93.7	93.2 ± 0.3	93.6–95.2	94.1 ± 0.5	92.8–93.5	93.1 ± 0.2	92.5–100	93.1 ± 1.1	92–100	92.5 ± 1.2

NEIS1367	Putative lipoprotein	96.1–96.6	96.2 ± 0.3	98.9–100	99.2 ± 0.4	97–98.3	97.5 ± 0.6	99.6–99.8	99.6 ± 0.1	97.2–97.7	97.3 ± 0.3	98.1–98.3	98.1 ± 0.1
NEIS1271	Hypothetical protein	95.5–97.1	96.4 ± 0.4	97.3–100	99 ± 0.5	96.9–98.7	97.7 ± 0.4	97.8–99.9	99.3 ± 0.4	95.6–97.1	96.4 ± 0.4	96.9–98.2	97.6 ± 0.3
NEIS1858	Hypothetical protein	92.4–99.1	94.5 ± 1.5	91.6–100	98.3 ± 1.9	95.5–99.6	96.4 ± 1.0	95.2–99.9	98.8 ± 1.3	92.2–99.8	94.5 ± 2.1	95.5–99.6	96.4 ± 1.0
NEIS1945	Hypothetical protein	74.2–99.2	82.3 ± 8.3	74.0–100	93.5 ± 9.2	78.4–99.2	82.9 ± 7.9	79–99.9	94.1 ± 8.6	74.2–99.4	82.8 ± 8.9	78.5–99.2	82.8 ± 7.8
NEIS1485	Hypothetical protein	97.3–100	97.7 ± 0.7	97.3–100	99 ± 0.9	97.6–99.8	98 ± 0.6	97.5–99.8	99.1 ± 0.9	97.3–99.1	97.7 ± 0.5	97.6–99.2	97.9 ± 0.5
NEIS1546	Hypothetical protein	88.4–97.7	96.1 ± 2.2	87.0–100	97.9 ± 3.4	89.2–97.8	96.6 ± 1.4	89–99.9	98.4 ± 2.9	88.1–97.4	96.1 ± 2.0	89.2–97.8	96.8 ± 1.7
NEIS1746	Hypothetical protein	62.7–87.7	67 ± 9.3	98.4–100	99 ± 0.5	67.8–80.9	71.2 ± 4.7	99.5–99.7	99.5 ± 0.1	50–79.3	61 ± 13.8	70.3–70.6	70.4 ± 0.1
NEIS2446	Hypothetical protein	83.5–91.2	88.1 ± 2.4	90.1–100	96.5 ± 2.7	80.6–92	91 ± 3.8	91.5–99.9	97.3 ± 2.6	100–100	100 ± 0.0	100–100	100 ± 0.0
NEIS0790	Hypothetical protein	74.6–80.6	76.7 ± 2.2	93–100	97.7 ± 2.6	82.5–89.4	85.9 ± 2.6	99.5–99.7	99.5 ± 0.1	71–75.3	72.3 ± 1.5	82.5–86.9	83.8 ± 1.8
NEIS1136	Hypothetical protein	82.6–83.7	83.1 ± 0.5	97.8–100	98.9 ± 0.6	85.6–85.9	85.7 ± 0.3	99.3–99.6	99.4 ± 0.2	100–100	100 ± 0.0	100–100	100 ± 0.0
NEIS1253	Hypothetical protein	91.9–97.5	93.4 ± 1.3	93.8–100	98.1 ± 1.5	94–98.1	94.6 ± 1.0	95.2–99.7	98.9 ± 1.4	100–100	100 ± 0.0	100–100	100 ± 0.0