

**Supplementary Table S5** Average nucleotide identity (ANI) and digital DNA-DNA hybridization (dDDH) of *Polaribacter* spp. Hel1\_33\_49 and Hel1\_85 compared to the currently available *Polaribacter* genomes (*P. franzmannii* 301<sup>T</sup> was excluded due to its fragmented status). ANI was calculated using JSpecies (Richter & Rosselló-Móra, 2009) and dDDH was calculated using the Genome-to-Genome Distance Calculator (GGDC, Auch *et al.*, 2010).

	<i>P. sp.</i> Hel1_33_49	<i>P. sp.</i> Hel1_85	<i>P. irgensii</i> 23-P <sup>T</sup>	<i>P. sp.</i> MED152
ANIb (ANI with blast)				
<i>Polaribacter sp.</i> Hel1_33_49	–	80.0	69.8	77.1
<i>Polaribacter sp.</i> Hel1_85	80.1	–	69.1	77.7
dDDH				
<i>Polaribacter sp.</i> Hel1_33_49	–	23.9	15.9	21.2
<i>Polaribacter sp.</i> Hel1_85	23.9	–	15.4	20.5

Auch AF, von Jan M, Klenk H-P, Göker M. (2010). Digital DNA-DNA hybridization for microbial species delineation by means of genome-to-genome sequence comparison. *Stand Genomic Sci* **2**: 117-134.

Richter M, Rosselló-Móra R. (2009). Shifting the genomic gold standard for the prokaryotic species definition. *Proc Natl Acad Sci USA* **106**: 19126-19131.