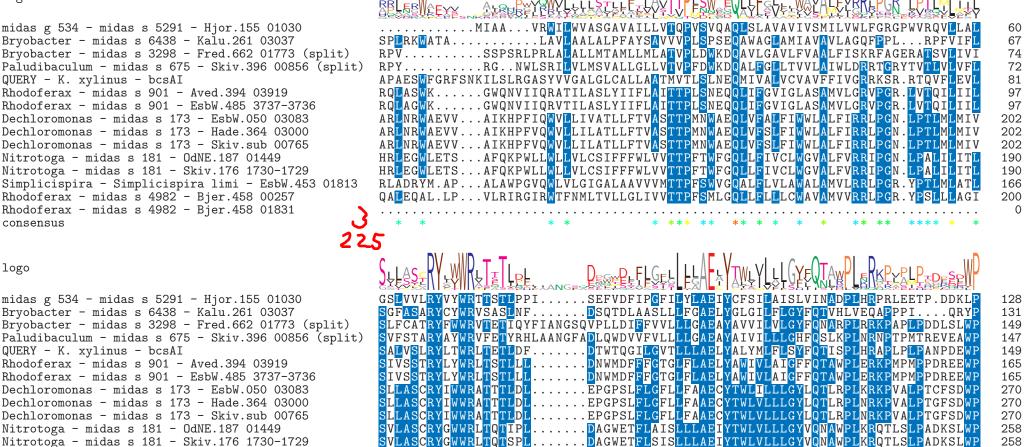
consensus

midas g 534 - midas s 5291 - Hjor.155 01030 Bryobacter - midas s 6438 - Kalu.261 03037 Bryobacter - midas s 3298 - Fred.662 01773 (split) Paludibaculum - midas s 675 - Skiv.396 00856 (split) QUERY - K. xylinus - bcsAI Rhodoferax - midas s 901 - Aved.394 03919 Rhodoferax - midas s 901 - EsbW.485 3737-3736 Dechloromonas - midas s 173 - EsbW.050 03083 Dechloromonas - midas s 173 - Hade.364 03000 Dechloromonas - midas s 173 - Skiv.sub 00765 Nitrotoga - midas s 181 - OdNE.187 01449 Nitrotoga - midas s 181 - Skiv.176 1730-1729 Simplicispira - Simplicispira limi - EsbW.453 01813 Rhodoferax - midas s 4982 - Bjer.458 00257 Rhodoferax - midas s 4982 - Bjer.458 01831 consensus	MTLPTAIRSALLFFAAQLAVTIPNSPRQWLWRLFIKPVCLP. SRPLNPPSRLIARLSRKLGVIDYRDTSEW MTLPTAIRSALLFFAAQLAVTIPNSPRQWLWRLFIKPVCLP. SRPLNPPSRLIARLSRKLGVIDYRDTSEW MTLPTAIRSALLFFAAQLAVTIPNSPRQWLWRLFIKPVCLP. SRPLNPPSRLIARLSRKLGVIDYRDTSEW MTLPTAIRSALLFFAAQLAVTIPNSPRQWLWRLFIKPVCLP. SRPLNPPSRLIARLSRKLGVIDYRDTSEW MTLPTAIRSALLFFAAQLAVTIPNSPRQWLWRLFIKPVCLP. SRPLNPPSRLIARLSRKLGVIDYRDTSEW MRHLLKRPFSLPKADGLAVSARVEVRPRPDPLGWLAEELGVVDRHSVWQW MRHLLKRPFSLPKADGLAVSARVEVRPRPDPLGWLAEELGVVDRHSVWQW MRHLLKRPFSLPKADGLAVSARVEVRPRPDPLGWLAEELGVVDRHSVWQW MRHLLKRPFSLPKADGLAVSARVEVRPRPDPLGWLAEELGVVDRHSVWQW MNLHASLVWLAFQLQVAQPERWLAWLLRLFVLPPANQMLQAP. DPARVPNPRTWAAHTLGIAPDARWHVW	0 0 0 0 0 0 70 70 70 50 50 24 69 0
midas g 534 - midas s 5291 - Hjor.155 01030 Bryobacter - midas s 6438 - Kalu.261 03037 Bryobacter - midas s 3298 - Fred.662 01773 (split) Paludibaculum - midas s 675 - Skiv.396 00856 (split) QUERY - K. xylinus - bcsAI Rhodoferax - midas s 901 - Aved.394 03919 Rhodoferax - midas s 901 - EsbW.485 3737-3736 Dechloromonas - midas s 173 - EsbW.050 03083 Dechloromonas - midas s 173 - Hade.364 03000 Dechloromonas - midas s 173 - Skiv.sub 00765 Nitrotoga - midas s 181 - OdNE.187 01449 Nitrotoga - midas s 181 - Skiv.176 1730-1729 Simplicispira - Simplicispira limi - EsbW.453 01813 Rhodoferax - midas s 4982 - Bjer.458 00257 Rhodoferax - midas s 4982 - Bjer.458 01831	VLELFLPSHRAASEANETELAPGFFERUTQPLTS VLRLLFLPSHRAASEANETELAPGFFERUTQPLTS MNIRRI RRARFEMRLIGR KRLFSP LVLAV MNIRRI RRARFEMRLIGR KRLFSP L	0 6 9 9 7 29 29 131 131 131 119 119 96 130



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consensus

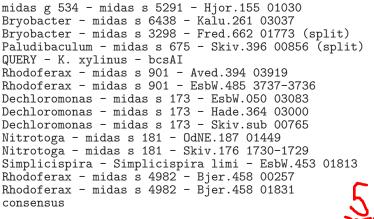


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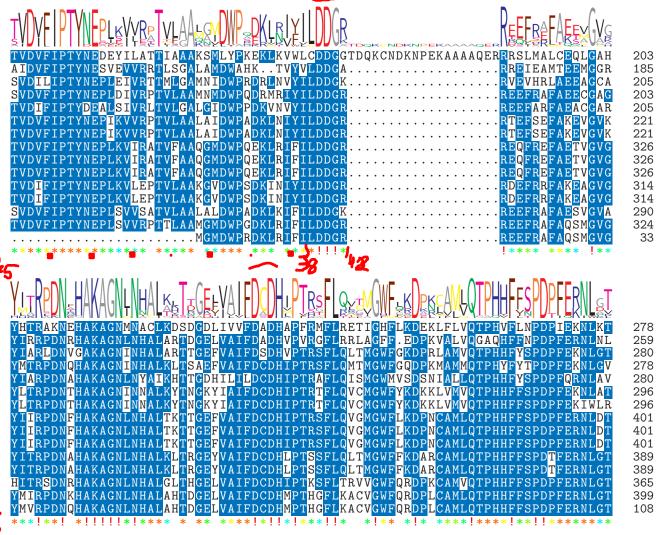
Simplicispira - Simplicispira limi - EsbW.453 01813

Rhodoferax - midas s 4982 - Bjer.458 00257

Rhodoferax - midas s 4982 - Bjer.458 01831

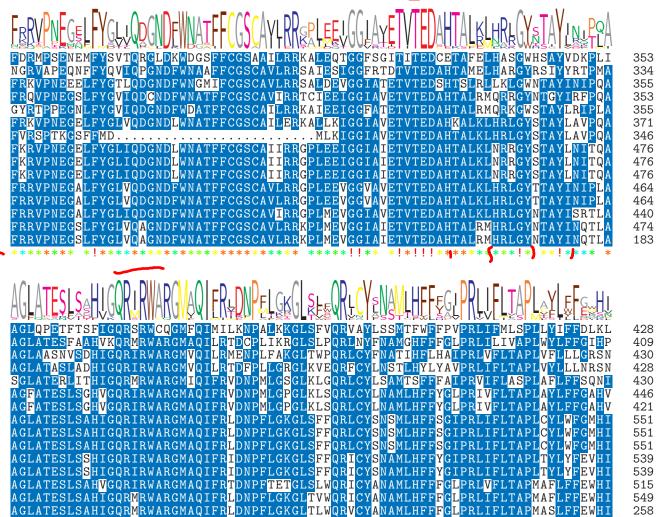


midas g 534 - midas s 5291 - Hjor.155 01030 Bryobacter - midas s 6438 - Kalu.261 03037 Bryobacter - midas s 3298 - Fred.662 01773 (split) Paludibaculum - midas s 675 - Skiv.396 00856 (split) QUERY - K. xylinus - bcsAI Rhodoferax - midas s 901 - Aved.394 03919 Rhodoferax - midas s 901 - EsbW.485 3737-3736 Dechloromonas - midas s 173 - EsbW.050 03083 Dechloromonas - midas s 173 - Hade.364 03000 Dechloromonas - midas s 173 - Skiv.sub 00765 Nitrotoga - midas s 181 - OdNE.187 01449 Nitrotoga - midas s 181 - Skiv.176 1730-1729 Simplicispira - Simplicispira limi - EsbW.453 01813 Rhodoferax - midas s 4982 - Bjer.458 00257 Rhodoferax - midas s 4982 - Bjer.458 01831 consensus



midas g 534 - midas s 5291 - Hjor.155 01030
Bryobacter - midas s 6438 - Kalu.261 03037
Bryobacter - midas s 3298 - Fred.662 01773 (split)
Paludibaculum - midas s 675 - Skiv.396 00856 (split)
QUERY - K. xylinus - bcsAI
Rhodoferax - midas s 901 - Aved.394 03919
Rhodoferax - midas s 901 - EsbW.485 3737-3736
Dechloromonas - midas s 173 - EsbW.050 03083
Dechloromonas - midas s 173 - Hade.364 03000
Dechloromonas - midas s 173 - Skiv.sub 00765
Nitrotoga - midas s 181 - OdNE.187 01449
Nitrotoga - midas s 181 - Skiv.176 1730-1729
Simplicispira - Simplicispira limi - EsbW.453 01813
Rhodoferax - midas s 4982 - Bjer.458 00257
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consensus

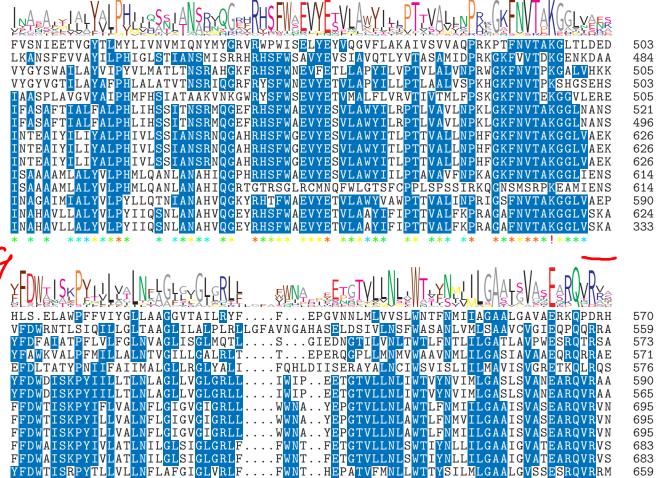
midas g 534 - midas s 5291 - Hjor.155 01030 Bryobacter - midas s 6438 - Kalu.261 03037 Bryobacter - midas s 3298 - Fred.662 01773 (split) Paludibaculum - midas s 675 - Skiv.396 00856 (split) QUERY - K. xylinus - bcsAI Rhodoferax - midas s 901 - Aved.394 03919 Rhodoferax - midas s 901 - EsbW.485 3737-3736 Dechloromonas - midas s 173 - EsbW.050 03083 Dechloromonas - midas s 173 - Hade.364 03000 Dechloromonas - midas s 173 - Skiv.sub 00765 Nitrotoga - midas s 181 - OdNE.187 01449 Nitrotoga - midas s 181 - Skiv.176 1730-1729 Simplicispira - Simplicispira limi - EsbW.453 01813 Rhodoferax - midas s 4982 - Bjer.458 00257 Rhodoferax - midas s 4982 - Bjer.458 01831 consensus



<u>*|**********||</u>*||**||*||**||*|



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VFNA..QETSTVLLNLIWTSYSIVILGAALGVASESRQVRRT

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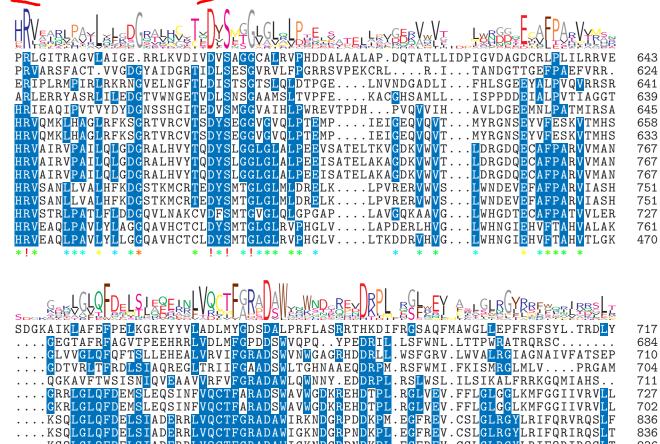
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<u>YFDWAISIPYTILVILN</u>FAAFGM<mark>GL</mark>LRLF

midas g 534 - midas s 5291 - Hjor.155 01030 Bryobacter - midas s 6438 - Kalu.261 03037 Bryobacter - midas s 3298 - Fred.662 01773 (split) Paludibaculum - midas s 675 - Skiv.396 00856 (split) QUERY - K. xylinus - bcsAI Rhodoferax - midas s 901 - Aved.394 03919 Rhodoferax - midas s 901 - EsbW.485 3737-3736 Dechloromonas - midas s 173 - EsbW.050 03083 Dechloromonas - midas s 173 - Hade.364 03000 Dechloromonas - midas s 173 - Skiv.sub 00765 Nitrotoga - midas s 181 - OdNE.187 01449 Nitrotoga - midas s 181 - Skiv.176 1730-1729 Simplicispira - Simplicispira limi - EsbW.453 01813 Rhodoferax - midas s 4982 - Bjer.458 00257 Rhodoferax - midas s 4982 - Bjer.458 01831 consensus

logo

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consensus

Dechloromonas - midas s 173 - Skiv.sub 00765

Nitrotoga - midas s 181 - Skiv.176 1730-1729 Simplicispira - Simplicispira limi - EsbW.453 01813

Nitrotoga - midas s 181 - OdNE.187 01449

Rhodoferax - midas s 4982 - Bjer.458 00257

Rhodoferax - midas s 4982 - Bjer.458 01831

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logo		
midas g 534 - midas s 5291 - Hjor.155 01030 Bryobacter - midas s 6438 - Kalu.261 03037 Bryobacter - midas s 3298 - Fred.662 01773 (split) Paludibaculum - midas s 675 - Skiv.396 00856 (split) QUERY - K. xylinus - bcsAI Rhodoferax - midas s 901 - Aved.394 03919 Rhodoferax - midas s 901 - EsbW.485 3737-3736 Dechloromonas - midas s 173 - EsbW.050 03083 Dechloromonas - midas s 173 - Hade.364 03000	APEPVLNDPLADLIAALNPSSRGAAPSNDDDKIVAIPTQAAAPTMAAEPDDQMEEDPIQALRKLLERAKPGAKGA	861 708 739 741 745 754 729 867 867

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	RIRAA	
midas g 534 - midas s 5291 - Hjor.155 01030	RIRAA	866
Bryobacter - midas s 6438 - Kalu.261 03037		708
Bryobacter - midas s 3298 - Fred.662 01773 (split)		739
Paludibaculum - midas s 675 - Skiv.396 00856 (split)		741
QUERY - K. xylinus - bcsAI		745
Rhodoferax - midas s 901 - Aved.394 03919		754
Rhodoferax - midas s 901 - EsbW.485 3737-3736		729
Dechloromonas - midas s 173 - EsbW.050 03083		867
Dechloromonas - midas s 173 - Hade.364 03000		867
Dechloromonas - midas s 173 - Skiv.sub 00765		867
Nitrotoga - midas s 181 - OdNE.187 01449		835
Nitrotoga - midas s 181 - Skiv.176 1730-1729		835
Simplicispira - Simplicispira limi - EsbW.453 01813		812
Rhodoferax - midas s 4982 - Bjer.458 00257		852
Rhodoferax - midas s 4982 - Bjer.458 01831		562
consensus		

 \overline{X} non-conserved \overline{X} $\geq 50\%$ conserved