

Fig. S1

A

Otdsxf1 ATGTCCGATCAACAGGATTACGAGACGAAAAATGGACCTAAACCGCTCTAGTACATCGAGCAGTCCGAGGACACCGCCAAATTGCGCTCGA
Otdsxf2 ATGTCCGATCAACAGGATTACGAGACGAAAAATGGACCTAAACCGCTCTAGTACATCGAGCAGTCCGAGGACACCGCCAAATTGCGCTCGA
Otdsxf3 ATGTCCGATCAACAGGATTACGAGACGAAAAATGGACCTAAACCGCTCTAGTACATCGAGCAGTCCGAGGACACCGCCAAATTGCGCTCGA
Otdsxf4 ATGTCCGATCAACAGGATTACGAGACGAAAAATGGACCTAAACCGCTCTAGTACATCGAGCAGTCCGAGGACACCGCCAAATTGCGCTCGA
Otdsxf5 ATGTCCGATCAACAGGATTACGAGACGAAAAATGGACCTAAACCGCTCTAGTACATCGAGCAGTCCGAGGACACCGCCAAATTGCGCTCGA
Otdsxm ATGTCCGATCAACAGGATTACGAGACGAAAAATGGATCTAAACCGCTCTAGTACATCGAGCAGTCCGAGGACACCGCCAAATTGCGCTCGA
Otdsxb ATGTCCGATCAACAGGATTACGAGACGAAAAATGGACCTAAACCGCTCTAGTACATCGAGCAGTCCGAGGACACCGCCAAATTGCGCTCGA

Otdsxf1 TGTAGAAATCACCGGTAAAAGTCCCCTGAAGGGCCATAAAAAGATACTGTAAGTACAGGCATTGCAAGTGTGAAAAATGCCGGCTTACG
Otdsxf2 TGTAGAAATCACCGGTAAAAGTCCCCTGAAGGGCCATAAAAAGATACTGTAAGTACAGGCATTGCAAGTGTGAAAAATGCCGGCTTACG
Otdsxf3 TGTAGAAATCACCGGTAAAAGTCCCCTGAAGGGCCATAAAAAGATACTGTAAGTACAGGCATTGCAAGTGTGAAAAATGCCGGCTTACG
Otdsxf4 TGTAGAAATCACCGGTAAAAGTCCCCTGAAGGGCCATAAAAAGATACTGTAAGTACAGGCATTGCAAGTGTGAAAAATGCCGGCTTACG
Otdsxf5 TGTAGAAATCACCGGTAAAAGTCCCCTGAAGGGCCATAAAAAGATACTGTAAGTACAGGCATTGCAAGTGTGAAAAATGCCGGCTTACG
Otdsxm TGTAGAAATCACCGGTAAAAGTCCCCTGAAGGGCCATAAAAAGATACTGTAAGTACAGGCATTGCAAGTGTGAAAAATGCCGGCTTACG
Otdsxb TGTAGAAATCACCGGTAAAAGTCCCCTGAAGGGCCATAAAAAGATACTGTAAGTACAGGCATTGCAAGTGTGAAAAATGCCGGCTTACG

Otdsxf1 TCCGAAAGACAGAGAGTGATGGCAATGCAAACCGCACTTCGTCGAGCACAAGCTCAAGACGAAGCAATGTTAAGGCAAGGGGTGATTCCC
Otdsxf2 TCCGAAAGACAGAGAGTGATGGCAATGCAAACCGCACTTCGTCGAGCACAAGCTCAAGACGAAGCAATGTTAAGGCAAGGGGTGATTCCC
Otdsxf3 TCCGAAAGACAGAGAGTGATGGCAATGCAAACCGCACTTCGTCGAGCACAAGCTCAAGACGAAGCAATGTTAAGGCAAGGGGTGATTCCC
Otdsxf4 TCCGAAAGACAGAGAGTGATGGCAATGCAAACCGCACTTCGTCGAGCACAAGCTCAAGACGAAGCAATGTTAAGGCAAGGGGTGATTCCC
Otdsxf5 TCCGAAAGACAGAGAGTGATGGCAATGCAAACCGCACTTCGTCGAGCACAAGCTCAAGACGAAGCAATGTTAAGGCAAGGGGTGATTCCC
Otdsxm TCCGAAAGACAGAGAGTGATGGCAATGCAAACCGCACTTCGTCGAGCACAAGCTCAAGACGAAGCAATGTTAAGGCAAGGGGTGATTCCC
Otdsxb TCCGAAAGACAGAGAGTGATGGCAATGCAAACCGCACTTCGTCGAGCACAAGCTCAAGACGAAGCAATGTTAAGGCAAGGGGTGATTCCC

Otdsxf1 CAATCGAAAAGCCCTGCACCGCTTCATAGTGGCCCCGACCGAACATACGAATGTGAATCACCAGGATCTTCATCAACACCAACTTTTCCG
Otdsxf2 CAATCGAAAAGCCCTGCACCGCTTCATAGTGGCCCCGACCGAACATACGAATGTGAATCACCAGGATCTTCATCAACACCAACTTTTCCG
Otdsxf3 CAATCGAAAAGCCCTGCACCGCTTCATAGTGGCCCCGACCGAACATACGAATGTGAATCACCAGGATCTTCATCAACACCAACTTTTCCG
Otdsxf4 CAATCGAAAAGCCCTGCACCGCTTCATAGTGGCCCCGACCGAACATACGAATGTGAATCACCAGGATCTTCATCAACACCAACTTTTCCG
Otdsxf5 CAATCGAAAAGCCCTGCACCGCTTCATAGTGGCCCCGACCGAACATACGAATGTGAATCACCAGGATCTTCATCAACACCAACTTTTCCG
Otdsxm CAATCGAAAAGCCCTGCACCGCTTCATAGTGGCCCCGACCGAACATACGAATGTGAATCACCAGGATCTTCATCAACACCAACTTTTCCG
Otdsxb CAATCGAAAAGCCCTGCACCGCTTCATAGTGGCCCCGACCGAACATACGAATGTGAATCACCAGGATCTTCATCAACACCAACTTTTCCG

Otdsxf1 GAAGTTGTCAGGAAAGCGCCGATGGAACCAATCAGAGATAAATTTGGGGAATAACAATATTGGCCAAAAAGATTTAATTCAAGAAAGCTTA
Otdsxf2 GAAGTTGTCAGGAAAGCGCCGATGGAACCAATCAGAGATAAATTTGGGGAATAACAATATTGGCCAAAAAGATTTAATTCAAGAAAGCTTA
Otdsxf3 GAAGTTGTCAGGAAAGCGCCGATGGAACCAATCAGAGATAAATTTGGGGAATAACAATATTGGCCAAAAAGATTTAATTCAAGAAAGCTTA
Otdsxf4 GAAGTTGTCAGGAAAGCGCCGATGGAACCAATCAGAGATAAATTTGGGGAATAACAATATTGGCCAAAAAGATTTAATTCAAGAAAGCTTA
Otdsxf5 GAAGTTGTCAGGAAAGCGCCGATGGAACCAATCAGAGATAAATTTGGGGAATAACAATATTGGCCAAAAAGATTTAATTCAAGAAAGCTTA
Otdsxm GAAGTTGTCAGGAAAGCGCCGATGGAACCAATCAGAGATAAATTTGGGGAATAACAATATTGGCCAAAAAGATTTAATTCAAGAAAGCTTA
Otdsxb GAAGTTGTCAGGAAAGCGCCGATGGAACCAATCAGAGATAAATTTGGGGAATAACA-----

Otdsxf1 CAACTATTAGAAAAGTTCCGATATTCGTGGGAAATGATGCCATTGATTTATGCGATAGTCAAAGACACTCCAGATCTCGAAGAAGCGTCA
Otdsxf2 CAACTATTAGAAAAGTTCCGATATTCGTGGGAAATGATGCCATTGATTTATGCGATAGTCAAAGACACTCCAGATCTCGAAGAAGCGTCA
Otdsxf3 CAACTATTAGAAAAGTTCCGATATTCGTGGGAAATGATGCCATTGATTTATGCGATAGTCAAAGACACTCCAGATCTCGAAGAAGCGTCA
Otdsxf4 CAACTATTAGAAAAGTTCCGATATTCGTGGGAAATGATGCCATTGATTTATGCGATAGTCAAAGACACTCCAGATCTCGAAGAAGCGTCA
Otdsxf5 CAACTATTAGAAAAGTTCCGATATTCGTGGGAAATGATGCCATTGATTTATGCGATAGTCAAAGACACTCCAGATCTCGAAGAAGCGTCA
Otdsxm CAACTATTAGAAAAGTTCCGATATTCGTGGGAAATGATGCCATTGATTTATGCGATAGTCAAAGACACTCCAGATCTCGAAGAAGCGTCA
Otdsxb -----

Otdsxf1 AAACGTATAGATGAAGGGCAAAGGGCAGTGAAGGAATACTCAATAATCAACAACCTCAACATGTACGACGGTGGAGAGCTACGTTATCCT
Otdsxf2 AAACGTATAGATGAAGGGCAAAGGGCAGTGAAGGAATACTCAATAATCAACAACCTCAACATGTACGACGGTGGAGAGCTACGTTATCCT
Otdsxf3 AAACGTATAGATGAAGGGCAAAGGGCAGTGAAGGAATACTCAATAATCAACAACCTCAACATGTACGACGGTGGAGAGCTACGTTATCCT
Otdsxf4 AAACGTATAGATGAAGGGCAAAGGGCAGTGAAGGAATACTCAATAATCAACAACCTCAACATGTACGACGGTGGAGAGCTACGTTATCCT
Otdsxf5 AAACGTATAGATGAAGGGCAAAGGGCAGTGAAGGAATACTCAATAATCAACAACCTCAACATGTACGACGGTGGAGAGCTACGTTATCCT
Otdsxm AAACGTATAGATGAAGG-----
Otdsxb -----

Otdsxf1 ACTCGTCAGTATGGATGATTAAGATTTAAAAATATTTCAATACAATAAAAAAGTATCCATAAGAGTCAACTTTAAATATTTTTTAATAA
Otdsxf2 ACTC-----
Otdsxf3 ACTC-----
Otdsxf4 ACTC-----
Otdsxf5 ACTC-----
Otdsxm -----
Otdsxb -----

Otdsxf1 CTTTTACACTAAAAATAACAATTTTTTCATCTTCTCTTTATTTCTTCGATAAATAATAATTTTTTTAGTAGTAATGCATGTTTTTTCTG
Otdsxf2 -----
Otdsxf3 -----
Otdsxf4 -----
Otdsxf5 -----
Otdsxm -----
Otdsxb -----

Otdsxf1 CATTTTGTTTTCCAACAACATAGATAAGAGGGCGCAAGAACGACGATCTTCCGGGACCTTCAAACCAATCGGCGGCGTTAATCTTCAGGTG
Otdsxf2 -----ATAAGAGGGCGCAAGAACGACGATCTTCCGGGACCTTCAAACCAATCGGCGGCGTTAATCTTCAGGTG
Otdsxf3 -----ATAAGAGGGCGCAAGAACGACGATCTTCCGGGACCTTCAAACCAATCGGCGGCGTTAATCTTCAG---
Otdsxf4 -----ATAAGAGGGCGCAAGAACGACGATCTTCCGGGACCTTCAAACCAATCGGCGGCGTTAATCTTCAG---
Otdsxf5 -----ATAAGAGGGCGCAAGAACGACGATCTTCCGGGACCTTCAAACCAATCGGCGGCGTTAATCTTCAG---
Otdsxm -----
Otdsxb -----

Otdsxf1 AAACGCAACTTACACGTTAAATAAGGATATCATCATTACCGTATAGTTAAAAATTAGATTTTTAGCGTTTAAATGATTCAAACCTGGCTTT
Otdsxf2 AAACGCAACTTACACGTTAAATAAGGATATCATCATTACCGTATAGTTAAAAATTAGATTTTTAGCGTTTAAATGATTCAAACCTGGCTTT
Otdsxf3 -----TTAAAAATTAGATTTTTAGCGTTTAAATGATTCAAACCTGGCTTT
Otdsxf4 -----ATTTTTAGCGTTTAAATGATTCAAACCTGGCTTT
Otdsxf5 -----CGTTTAAATGATTCAAACCTGGCTTT
Otdsxm -----
Otdsxb -----

Otdsxf1 ATTAATACAAAAAGAATGATCCGGCCTTAACGAAGAGTATTATTACAATAAATTTAATGTAGAAAACCTCAAGTGTAAAATATAA
Otdsxf2 ATTAATACAAAAAGAATGATCCGGCCTTAACGAAGAGTATTATTACAATAAATTTAATGTAGAAAACCTCAAGTGTAAAATATAA
Otdsxf3 ATTAATACAAAAAGAATGATCCGGCCTTAACGAAGAGTATTATTACAATAAATTTAATGTAGAAAACCTCAAGTGTAAAATATAA
Otdsxf4 ATTAATACAAAAAGAATGATCCGGCCTTAACGAAGAGTATTATTACAATAAATTTAATGTAGAAAACCTCAAGTGTAAAATATAA
Otdsxf5 ATTAATACAAAAAGAATGATCCGGCCTTAACGAAGAGTATTATTACAATAAATTTAATGTAGAAAACCTCAAGTGTAAAATATAA
Otdsxm -----
Otdsxb -----

Otdsxf1 TTATTAAGACTACATATTAAGCCAATTTTTTATGAATCAGTATTTTTTAACGAAGAAGCCTCAATTATTTTGCTTATAAGTATTACATAT
Otdsxf2 TTATTAAGACTACATATTAAGCCAATTTTTTATGAATCAGTATTTTTTAACGAAGAAGCCTCAATTATTTTGCTTATAAGTATTACATAT
Otdsxf3 TTATTAAGACTACATATTAAGCCAATTTTTTATGAATCAGTATTTTTTAACGAAGAAGCCTCAATTATTTTGCTTATAAGTATTACATAT
Otdsxf4 TTATTAAGACTACATATTAAGCCAATTTTTTATGAATCAGTATTTTTTAACGAAGAAGCCTCAATTATTTTGCTTATAAGTATTACATAT
Otdsxf5 TTATTAAGACTACATATTAAGCCAATTTTTTATGAATCAGTATTTTTTAACGAAGAAGCCTCAATTATTTTGCTTATAAGTATTACATAT
Otdsxm -----
Otdsxb -----

Otdsxf1 TCTTTGCGGCATTATTACATTAATTTATCTGCGCACCTATTATCAACAAAAACGTATAATAAAGGTAGAGATGCTGAACAACCTGGTGGAT
Otdsxf2 TCTTTGCGGCATTATTACATTAATTTATCTGCGCACCTATTATCAACAAAAACGTATAATAAAGGTAGAGATGCTGAACAACCTGGTGGAT
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Otdsxf5 TCTTTGCGGCATTATTACATTAATTTATCTGCGCACCTATTATCAACAAAAACGTATAATAAAGGTAGAGATGCTGAACAACCTGGTGGAT
Otdsxm -----TAGAGATGCTGAACAACCTGGTGGAT
Otdsxb -----

Otdsxf1 TTTTTAATAAAAAATAAAGGATAGGTTTCACTTATCCTGGAAAATGATCTCACTTATCCACGTCATCCTAAAGAACGCTAAGGACGATCAG
Otdsxf2 TTTTTAATAAAAAATAAAGGATAGGTTTCACTTATCCTGGAAAATGATCTCACTTATCCACGTCATCCTAAAGAACGCTAAGGACGATCAG
Otdsxf3 TTTTTAATAAAAAATAAAGGATAGGTTTCACTTATCCTGGAAAATGATCTCACTTATCCACGTCATCCTAAAGAACGCTAAGGACGATCAG
Otdsxf4 TTTTTAATAAAAAATAAAGGATAGGTTTCACTTATCCTGGAAAATGATCTCACTTATCCACGTCATCCTAAAGAACGCTAAGGACGATCAG
Otdsxf5 TTTTTAATAAAAAATAAAGGATAGGTTTCACTTATCCTGGAAAATGATCTCACTTATCCACGTCATCCTAAAGAACGCTAAGGACGATCAG
Otdsxm TTTTTAATAAAAAATAAAGGATAGGTTTCACTTATCCTGGAAAATGATCTCACTTATCCACGTCATCCTAAAGAACGCTAAGGACGATCAG
Otdsxb -----

Otdsxf1 GAGAAAGCTTTTAGACAAATCGATGAAGCATTCTGGAGGTACAGGCTTTAGCAAATACTATCCAACACCGGTTAACCTCATCACTGAC
Otdsxf2 GAGAAAGCTTTTAGACAAATCGATGAAGCATTCTGGAGGTACAGGCTTTAGCAAATACTATCCAACACCGGTTAACCTCATCACTGAC
Otdsxf3 GAGAAAGCTTTTAGACAAATCGATGAAGCATTCTGGAGGTACAGGCTTTAGCAAATACTATCCAACACCGGTTAACCTCATCACTGAC
Otdsxf4 GAGAAAGCTTTTAGACAAATCGATGAAGCATTCTGGAGGTACAGGCTTTAGCAAATACTATCCAACACCGGTTAACCTCATCACTGAC
Otdsxf5 GAGAAAGCTTTTAGACAAATCGATGAAGCATTCTGGAGGTACAGGCTTTAGCAAATACTATCCAACACCGGTTAACCTCATCACTGAC
Otdsxm GAGAAAGCTTTTAGACAAATCGATGAAGCATTCTGGAGGTACAGGCTTTAGCAAATACTATCCAACACCGGTTAACCTCATCACTGAC
Otdsxb -----

Otdsxf1 CCATGGAGATGGTATTCACCTACAGCACTTTACCCGGCGATGTA CTACTATCAACTACCTAATACCTTCTTGGAATATTCCACCGAGTCCA
Otdsxf2 CCATGGAGATGGTATTCACCTACAGCACTTTACCCGGCGATGTA CTACTATCAACTACCTAATACCTTCTTGGAATATTCCACCGAGTCCA
Otdsxf3 CCATGGAGATGGTATTCACCTACAGCACTTTACCCGGCGATGTA CTACTATCAACTACCTAATACCTTCTTGGAATATTCCACCGAGTCCA
Otdsxf4 CCATGGAGATGGTATTCACCTACAGCACTTTACCCGGCGATGTA CTACTATCAACTACCTAATACCTTCTTGGAATATTCCACCGAGTCCA
Otdsxf5 CCATGGAGATGGTATTCACCTACAGCACTTTACCCGGCGATGTA CTACTATCAACTACCTAATACCTTCTTGGAATATTCCACCGAGTCCA
Otdsxm CCATGGAGATGGTATTCACCTACAGCACTTTACCCGGCGATGTA CTACTATCAACTACCTAATACCTTCTTGGAATATTCCACCGAGTCCA
Otdsxb -----

Otdsxf1 CCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Otdsxf2 CCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Otdsxf3 CCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Otdsxf4 CCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Otdsxf5 CCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Otdsxm CCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Otdsxb -----GTAAGTACTTTTACAATTTTTTTGTTAAAAGCTTTATTTATC

Otdsxb GCTGTGAATTAATTTATTTTTTAAAAGTACATATCAAATCAAAGGATTAAGGTGTACAAC TGAAACTATATAAGTAAAACTCTAATAC
Otdsxb CATCACTAATACCTTAAGTATTTATCAACTATTCAAATTAATGACTTGCAACGAAAAAAGCAGTTTTAATACTTTATAATTACAC
Otdsxb CTTTTCATTTAAGCAGTAGTAAGTGTATTTAATTTGAGTGTATTAATAAATTTAATTTTGTATTTATTAAGTTATAATTTATGACAATA
Otdsxb TGTCGTTTTGATAAATTTGTGTAAAATAGTGAGATCTTAAGCAGTAAGAGATCGTATCCTTAATGAGATAGAAGGTAATTTATAGGTTAA
Otdsxb AGC

B

OtDsxF1	1	MSDQQDYETKMDLNASSTSSSPRT	PPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLT	SERQRMAMQ	TALRRAQAQDEAMLRQGVIP	90
OtDsxF2	1	MSDQQDYETKMDLNASSTSSSPRT	PPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLT	SERQRMAMQ	TALRRAQAQDEAMLRQGVIP	90
OtDsxF3	1	MSDQQDYETKMDLNASSTSSSPRT	PPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLT	SERQRMAMQ	TALRRAQAQDEAMLRQGVIP	90
OtDsxF4	1	MSDQQDYETKMDLNASSTSSSPRT	PPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLT	SERQRMAMQ	TALRRAQAQDEAMLRQGVIP	90
OtDsxF5	1	MSDQQDYETKMDLNASSTSSSPRT	PPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLT	SERQRMAMQ	TALRRAQAQDEAMLRQGVIP	90
OtDsxM	1	MSDQQDYETKMDLNASSTSSSPRT	PPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLT	SERQRMAMQ	TALRRAQAQDEAMLRQGVIP	90
OtDSXB	1	MSDQQDYETKMDLNASSTSSSPRT	PPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLT	SERQRMAMQ	TALRRAQAQDEAMLRQGVIP	90
OtDsxF1	91	QSKSPAPLHSGPDRTYECESPGSSSTPTTF	PEVVRKAPMEPIRDNLGNNN	IGQKDLIQESLQLEKFRYSWEMMPLIYAIVK	TPDLEEAS	180
OtDsxF2	91	QSKSPAPLHSGPDRTYECESPGSSSTPTTF	PEVVRKAPMEPIRDNLGNNN	IGQKDLIQESLQLEKFRYSWEMMPLIYAIVK	TPDLEEAS	180
OtDsxF3	91	QSKSPAPLHSGPDRTYECESPGSSSTPTTF	PEVVRKAPMEPIRDNLGNNN	IGQKDLIQESLQLEKFRYSWEMMPLIYAIVK	TPDLEEAS	180
OtDsxF4	91	QSKSPAPLHSGPDRTYECESPGSSSTPTTF	PEVVRKAPMEPIRDNLGNNN	IGQKDLIQESLQLEKFRYSWEMMPLIYAIVK	TPDLEEAS	180
OtDsxF5	91	QSKSPAPLHSGPDRTYECESPGSSSTPTTF	PEVVRKAPMEPIRDNLGNNN	IGQKDLIQESLQLEKFRYSWEMMPLIYAIVK	TPDLEEAS	180
OtDsxM	91	QSKSPAPLHSGPDRTYECESPGSSSTPTTF	PEVVRKAPMEPIRDNLGNNN	IGQKDLIQESLQLEKFRYSWEMMPLIYAIVK	TPDLEEAS	180
OtDSXB	91	QSKSPAPLHSGPDRTYECESPGSSSTPTTF	PEVVRKAPMEPIRDNLGNN	-----	-----	138
OtDsxF1	181	KRIDEQORAVKEYSIINNLNMYDGGELRYP	TRQYG	-----	-----	215
OtDsxF2	181	KRIDEQORAVKEYSIINNLNMYDGGELRYP	THKRAQERRSSGTFKPIGGVNPQVKNLHV	K	-----	241
OtDsxF3	181	KRIDEQORAVKEYSIINNLNMYDGGELRYP	THKRAQERRSSGTFKPIGGVNLQKLD	F	-----	238
OtDsxF4	181	KRIDEQORAVKEYSTINNLNMYDGGELRYP	THKRAQERRSSGTFKPIGGVNLQIFSV	-----	-----	237
OtDsxF5	181	KRIDEQORAVKEYSIINNLNMYDGGELRYP	THKRAQERRSSGTFKPIGGVNLQRLMIQT	WLY	-----	242
OtDsxM	181	KRIDEQ	-----	-----	RDAEQLVDFFNKIKDRFHLSWKMISLIH	214
OtDSXB	138	-----	-----	-----	-----	138
OtDsxF1	215	-----	-----	-----	-----	215
OtDsxF2	241	-----	-----	-----	-----	241
OtDsxF3	238	-----	-----	-----	-----	238
OtDsxF4	237	-----	-----	-----	-----	237
OtDsxF5	242	-----	-----	-----	-----	242
OtDsxM	215	VILKNAKDDQEKAFRQIDEAFLEVOALAKYYP	TPVNLITDLWRWYSPTALYPAMYQLPNTLL	GNIPPSPLHSPVPPRPSRA	-----	299
OtDSXB	139	-----	-----	-----	-----	143
OtDsxF1	215	-----	215	-----	-----	215
OtDsxF2	241	-----	241	-----	-----	241
OtDsxF3	238	-----	238	-----	-----	238
OtDsxF4	237	-----	237	-----	-----	237
OtDsxF5	242	-----	242	-----	-----	242
OtDsxM	299	-----	299	-----	-----	299
OtDSXB	144	NFFVKSFIYRCELIYFLKVHIKSKD	168	-----	-----	143

C

BmDsxF1 MVSMGSKRRVPDDCEERSEPGASS-SGVPRAPPNCARCRNHLKIELKGHKRYCKYQHCTCEKCRLTADRQRVMAKQTAIRRAQAQDEA
 BmDsxF2 MVSMGSKRRVPDDCEERSEPGASS-SGVPRAPPNCARCRNHLKIELKGHKRYCKYQHCTCEKCRLTADRQRVMAKQTAIRRAQAQDEA
 BmDsxM MVSMGSKRRVPDDCEERSEPGASS-SGVPRAPPNCARCRNHLKIELKGHKRYCKYQHCTCEKCRLTADRQRVMAKQTAIRRAQAQDEA
 OtDsxF1 MSDQ-----QDYETKMDLNASSTSSSPRTPPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLTSERQRVMAMQTALRRAQAQDEA
 OtDsxF2 MSDQ-----QDYETKMDLNASSTSSSPRTPPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLTSERQRVMAMQTALRRAQAQDEA
 OtDsxF3 MSDQ-----QDYETKMDLNASSTSSSPRTPPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLTSERQRVMAMQTALRRAQAQDEA
 OtDsxF4 MSDQ-----QDYETKMDLNASSTSSSPRTPPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLTSERQRVMAMQTALRRAQAQDEA
 OtDsxF5 MSDQ-----QDYETKMDLNASSTSSSPRTPPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLTSERQRVMAMQTALRRAQAQDEA
 OtDsxM MSDQ-----QDYETKMDLNASSTSSSPRTPPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLTSERQRVMAMQTALRRAQAQDEA

BmDsxF1 RARALELGIQPPGMELDRPVPPVVKAPRSPMIPPSAPRSLGSASCDSVPGSPGVSPYAPP-SVPPPTMPPLIPTPQPPVPSETLVENC
 BmDsxF2 RARALELGIQPPGMELDRPVPPVVKAPRSPMIPPSAPRSLGSASCDSVPGSPGVSPYAPP-SVPPPTMPPLIPPPQPPVPSETLVENC
 BmDsxM RARALELGIQPPGMELDRPVPPVVKAPRSPMIPPSAPRSLGSASCDSVPGSPGVSPYAPP-SVPPPTMPPLIPTPQPPVPSETLVENC
 OtDsxF1 MLR-----QGVIPOKSKPAPLHSGPD--RTYECE----SPGSSSTPTFPVVRKAPMEPIRDNLGNNNIGOKDLIQES
 OtDsxF2 MLR-----QGVIPOKSKPAPLHSGPD--RTYECE----SPGSSSTPTFPVVRKAPMEPIRDNLGNNNIGOKDLIQES
 OtDsxF3 MLR-----QGVIPOKSKPAPLHSGPD--RTYECE----SPGSSSTPTFPVVRKAPMEPIRDNLGNNNIGOKDLIQES
 OtDsxF4 MLR-----QGVIPOKSKPAPLHSGPD--RTYECE----SPGSSSTPTFPVVRKAPMEPIRDNLGNNNIGOKDLIQES
 OtDsxF5 MLR-----QGVIPOKSKPAPLHSGPD--RTYECE----SPGSSSTPTFPVVRKAPMEPIRDNLGNNNIGOKDLIQES
 OtDsxM MLR-----QGVIPOKSKPAPLHSGPD--RTYECE----SPGSSSTPTFPVVRKAPMEPIRDNLGNNNIGOKDLIQES

BmDsxF1 HRLLEKFRYSWEMMPLVLVIMNYARSDLEASRKIYEGKMIVDEYARKHNLNVFDGLELRNSTRQKMLEINNISGVLSSSMKLFCE----
 BmDsxF2 HRLLEKFRYSWEMMPLVLVIMNYARSDLEASRKIYEGKMIVDEYARKHNLNVFDGLELRNSTRQYGL-----
 BmDsxM HRLLEKFRYSWEMMPLVLVIMNYARSDLEASRKIYEG-----
 OtDsxF1 LQLEKFRYSWEMMPLIYAIVK-DTPDLEEASKRIDEGQRAVKEYSIINNLMYDGGELRYPTRQYG-----
 OtDsxF2 LQLEKFRYSWEMMPLIYAIVK-DTPDLEEASKRIDEGQRAVKEYSIINNLMYDGGELRYPTHKRAQERRSSGTFKPIGGVNPQVKRNL
 OtDsxF3 LQLEKFRYSWEMMPLIYAIVK-DTPDLEEASKRIDEGQRAVKEYSIINNLMYDGGELRYPTHKRAQERRSSGTFKPIGGVNLQKLDF
 OtDsxF4 LQLEKFRYSWEMMPLIYAIVK-DTPDLEEASKRIDEGQRAVKEYSTINNLMYDGGELRYPTHKRAQERRSSGTFKPIGGVNLQIFSV-
 OtDsxF5 LQLEKFRYSWEMMPLIYAIVK-DTPDLEEASKRIDEGQRAVKEYSIINNLMYDGGELRYPTHKRAQERRSSGTFKPIGGVNLQRLMIQ
 OtDsxM LQLEKFRYSWEMMPLIYAIVK-DTPDLEEASKRIDEG-----

BmDsxF1 -----
 BmDsxF2 -----
 BmDsxM -----
 OtDsxF1 -----
 OtDsxF2 HVK-----
 OtDsxF3 -----
 OtDsxF4 -----
 OtDsxF5 TWLY-----
 OtDsxM ----RDAEQLVDFFNKIKDRFHLNLSWKMISLIHVILKNAKDDQEKAFRQIDEAFLEVOALAKYYPTPVNLIITDLWRWYSPTALYPAMYYQL

D

OtDsxF1 MSDQQ-----DYETKMDLNASSTSSSPRTPP-NCARCRNHRVKVPLKGHKRYCKYRHCKCEK
 OtDsxF2 MSDQQ-----DYETKMDLNASSTSSSPRTPP-NCARCRNHRVKVPLKGHKRYCKYRHCKCEK
 OtDsxF3 MSDQQ-----DYETKMDLNASSTSSSPRTPP-NCARCRNHRVKVPLKGHKRYCKYRHCKCEK
 OtDsxF4 MSDQQ-----DYETKMDLNASSTSSSPRTPP-NCARCRNHRVKVPLKGHKRYCKYRHCKCEK
 OtDsxF5 MSDQQ-----DYETKMDLNASSTSSSPRTPP-NCARCRNHRVKVPLKGHKRYCKYRHCKCEK
 OtDsxM MSDQQ-----DYETKMDLNASSTSSSPRTPP-NCARCRNHRVKVPLKGHKRYCKYRHCKCEK
 OtDsxB MSDQQ-----DYETKMDLNASSTSSSPRTPP-NCARCRNHRVKVPLKGHKRYCKYRHCKCEK
 AmDsxF1 MYREENEQNRAADLAPQQPSGANTFERLEHSQDSKNGDDGSKKVQTDASSSTNTPKPRARNCARCLNHRLEITLKSHKRYCKYRTCTCEK
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OtDsxF5	-----
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AmDsxB	-----
OtDsxF1	-----
OtDsxF2	-----
OtDsxF3	-----
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OtDsxB	-----
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AmDsxB	-----

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Otdxf5 CTGACCCATGGAGATGGTATTCACCTACAGCACTTTACCCGGCGATGTACTATCAACTACCTAATACCCCTTCTTGAAATATTCCACCGA
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Osdsm GTCCACCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Osdxf1 GTCCACCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Osdxf2 GTCCACCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Osdxf3 GTCCACCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Osdxf4 GTCCACCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Osdxf5 GTCCACCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Otdxf1 GTCCACCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Otdxf2 GTCCACCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Otdxf3 GTCCACCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Otdxf4 GTCCACCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Otdxf5 GTCCACCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA
Otdsm GTCCACCTTTACATTACCGGTACCACCCCAAGACCTAGAAGTAGAGCGTGA

F

OsDsxF1 MSDQQDYETKMDLNASSTSSSPRTFPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLTSEQRVMAKQTALRRAQAQDEAMLRQGVIP
 OsDsxF2 MSDQQDYETKMDLNASSTSSSPRTFPNCARCRNHRVKVPLKGHKRYCKYRHCKCEKCRLTSEQRVMAKQTALRRAQAQDEAMLRQGVIP
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OsDsxF1 QSKSPVPLYNGPDRTYECESPGSSSTPTFPDVVRKAPMEPIRDNLGNNNIGQKDLIQESLQLEKFRYSWEMMPLIYAIVKDTPDLEEAS
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OsDsxF1 KRIDEGQRAVKEYSIINNLNMYDGGELRYPHKAQERRSSGNFKPIGGVNLQRLTIQTWLYHKKNDPALTKSIITINLK-----KIKDRFHLWS
 OsDsxF2 KRIDEGQRAVKEYSIINNLNMYDGGELRYPHKAQERRSSGNFKPIGGVNLQVK-DF-----
 OsDsxF3 KRIDEGQRAVKEYSIINNLNMYDGGELRYPHKAQERRSSGNFKPIGGVNLQVKGNLHRLTIQTWLY-----
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 OtDsxF1 KRIDEGQRAVKEYSIINNLNMYDGGELRYPTRQYG-----
 OtDsxF2 KRIDEGQRAVKEYSIINNLNMYDGGELRYPHKAQERRSSGTFKPIGGVNLQVKNLHVK-----
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 OtDsxF4 KRIDEGQRAVKEYSIINNLNMYDGGELRYPHKAQERRSSGTFKPIGGVNLQIFSV-----
 OtDsxF5 KRIDEGQRAVKEYSIINNLNMYDGGELRYPHKAQERRSSGTFKPIGGVNLQ-----RLMIQTWLY-----
 OtDsxF5 KRIDEGQRAVKEYSIINNLNMYDGGELRYPHKAQERRSSGTFKPIGGVNLQ-----RLMIQTWLY-----KIKDRFHLWS

OsDsxM	KMISLIHVILKNSKDDQEKAFRQIDEAYLEVQALAKYYPTPVNLITDPWRWYSPTALYPAMYQLPNTLLGNIPPSPPLHSPVPPRPRSRA
OsDsxF1	-----
OsDsxF2	-----
OsDsxF3	-----
OsDsxF4	-----
OsDsxF5	-----
OtDsxF1	-----
OtDsxF2	-----
OtDsxF3	-----
OtDsxF4	-----
OtDsxF5	-----
OtDsxM	KMISLIHVILKNAKDDQEKAFRQIDEAFLEVQALAKYYPTPVNLITDPWRWYSPTALYPAMYQLPNTLLGNIPPSPPLHSPVPPRPRSRA