

Clustal Omega alignment of YPS1009 and seven other strains with truncated alleles.

Fasta files were recapitulated by mapping SNPs from the published vcf file () onto the S288c sequence and performing a multiple alignment using Clustal Omega (<https://www.ebi.ac.uk/Tools/msa/clustalo/>). Allelic differences are highlighted in yellow below. Only the YPS1009 sequence is shown beyond amino acid 840.

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CH02_IvoryCoast_AVN:YDR293C      MSKNSNVNNSRQEPNNMFVQTTGGGKNAPKQIHVAHRRSQSELNLMIEQFTLQKQLEQ 60
CH13_IvoryCoast_AVT:YDR293C      MSKNSNVNNSRQEPNNMFVQTTGGGKNAPKQIHVAHRRSQSELNLMIEQFTLQKQLEQ 60
YPS1009_ADF:YDR293C              MSKNSNVNNSRQEPNNMFVQTTGGGKNAPKQIHVAHRRSQSELNLMIEQFTLQKQLEQ 60
CBS6308_AleBeer                   MSKNSNVNNSRQEPNNMFVQTTGGGKNAPKQIHVAHRRSQSELNLMIEQFTLQKQLEQ 60
CBK_Insect_Mosaic:YDR293C         MSKNSNVNNSRQEPNNMFVQTTGGGKNAPKQIHVAHRRSQSELNLMIEQFTLQKQLEQ 60
W303                               MSKNSNVNNSRQEPNNMFVQTTGGGKNAPKQIHVAHRRSQSELNLMIEQFTLQKQLEQ 60
CBL_InsectMosaic:YDR293C          MSKNSNVNNSRQEPNNMFVQTTGGGKNAPKQIHVAHRRSQSELNLMIEQFTLQKQLEQ 60
CBM_InsectMosaic:YDR293C          MSKNSNVNNSRQEPNNMFVQTTGGGKNAPKQIHVAHRRSQSELNLMIEQFTLQKQLEQ 60
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CH02_IvoryCoast_AVN:YDR293C      VQAQQQLMAQQQQLAQQTGOYLSGNSGSNNHFTPPPPHYNSNGNSPGMSAGGSRRT 120
CH13_IvoryCoast_AVT:YDR293C      VQAQQQLMAQQQQLAQQTGOYLSGNSGSNNHFTPPPPHYNSNGNSPGMSAGGSRRT 120
YPS1009_ADF:YDR293C              VQAQQQLMAQQQQLAQQTGOYLSGNSGSNNHFTPPPPHYNSNGNSPGMSAGGSRRT 120
CBS6308_AleBeer                   VQAQQQLMAQQQQLAQQTGOYLSGNSGSNNHFTPPPPHYNSNGNSPGMSAGGSRRT 120
CBK_Insect_Mosaic:YDR293C         VQAQQQLMAQQQQLAQQTGOYLSGNSGSNNHFTPPPPHYNSNGNSPGMSAGGSRRT 120
W303                               VQAQQQLMAQQQQLAQQTGOYLSGNSGSNNHFTPPPPHYNSNGNSPGMSAGGSRRT 120
CBL_InsectMosaic:YDR293C          VQAQQQLMAQQQQLAQQTGOYLSGNSGSNNHFTPPPPHYNSNGNSPGMSAGGSRRT 120
CBM_InsectMosaic:YDR293C          VQAQQQLMAQQQQLAQQTGOYLSGNSGSNNHFTPPPPHYNSNGNSPGMSAGGSRRT 120
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CH02_IvoryCoast_AVN:YDR293C      HSRNNSGYHNSYDNNNSNPNPNSHRKTSSQSSYGHRRHSLGLNEAKKAAEEQAK 180
CH13_IvoryCoast_AVT:YDR293C      HSRNNSGYHNSYDNNNSNPNPNSHRKTSSQSSYGHRRHSLGLNEAKKAAEEQAK 180
YPS1009_ADF:YDR293C              HSRNNSGYHNSYDNNNSNPNPNSHRKTSSQSSYGHRRHSLGLNEAKKAAEEQAK 180
CBS6308_AleBeer                   HSRNNSGYHNSYDNNNSNPNPNSHRKTSSQSSYGHRRHSLGLNEAKKAAEEQAK 180
CBK_Insect_Mosaic:YDR293C         HSRNNSGYHNSYDNNNSNPNPNSHRKTSSQSSYGHRRHSLGLNEAKKAAEEQAK 180
W303                               HSRNNSGYHNSYDNNNSNPNPNSHRKTSSQSSYGHRRHSLGLNEAKKAAEEQAK 180
CBL_InsectMosaic:YDR293C          HSRNNSGYHNSYDNNNSNPNPNSHRKTSSQSSYGHRRHSLGLNEAKKAAEEQAK 180
CBM_InsectMosaic:YDR293C          HSRNNSGYHNSYDNNNSNPNPNSHRKTSSQSSYGHRRHSLGLNEAKKAAEEQAK 180
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CH02_IvoryCoast_AVN:YDR293C      RISGVKQA*----- 188
CH13_IvoryCoast_AVT:YDR293C      RISGGEAGVTVKMDSVQADSGSSTTEQSDFKFPPPPNAHQHRRATSNLSPPSFKFPPN 240
YPS1009_ADF:YDR293C              RISGGEAGVTVKIDSVDQADSGSNFTTEQSDFKFPPPPNAHQHRRATSNLSPPSFKFPPN 240
CBS6308_AleBeer                   RISGGEAGVTVKIDSVDQADSGSNSTTEQSDFKFPPPPNAHQHRRATSNLSPPSFKFPPN 240
CBK_Insect_Mosaic:YDR293C         RISGGEAGVTVKIDSVDQADSGSNSTTEQSDFKFPPPPNAHQHRRATSNLSPPSFKFPPN 240
W303                               RISGGEAGVTVKIDSVDQADSGSNSTTEQSDFKFPPPPNAHQHRRATSNLSPPSFKFPPN 240
CBL_InsectMosaic:YDR293C          RISGGEAGVTVKIDSVDQADSGSNSTTEQSDFKFPPPPNAHQHRRATSNLSPPSFKFPPN 240
CBM_InsectMosaic:YDR293C          RISGGEAGVTVKIDSVDQADSGSNSTTEQSDFKFPPPPNAHQHRRATSNLSPPSFKFPPN 240
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CH02_IvoryCoast_AVN:YDR293C      ----- 188
CH13_IvoryCoast_AVT:YDR293C      SHGDNDEFIATSSTHRRSKTRNNEYSPGINSNWRNQSQQPQQQLSPFRHRGNSRDYNS 300
YPS1009_ADF:YDR293C              SHGDNDEFIATSSTHRRSKTRNNEYSPGINSNWRNQSQQPQQQLSPFRHRGNSRDYNS 300
CBS6308_AleBeer                   SHGDNDEFIATSSTHRRSKTRNNEYSPGINSNWRNQSQQPQQQLSPFRHRGNSRDYNS 300
CBK_Insect_Mosaic:YDR293C         SHGDNDEFIATSSTHRRSKTRNNEYSPGINSNWRNQSQQPQQQLSPFRHRGNSRDYNS 300
W303                               SHGDNDEFIATSSTHRRSKTRNNEYSPGINSNWRNQSQQPQQQLSPFRHRGNSRDYNS 300
CBL_InsectMosaic:YDR293C          SHGDNDEFIATSSTHRRSKTRNNEYSPGINSNWRNQSQQPQQQLSPFRHRGNSRDYNS 300
CBM_InsectMosaic:YDR293C          SHGDNDEFIATSSTHRRSKTRNNEYSPGINSNWRNQSQQPQQQLSPFRHRGNSRDYNS 300
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CH02_IvoryCoast_AVN:YDR293C      ----- 188
CH13_IvoryCoast_AVT:YDR293C      FNTLEPPAIFQGGHKHRASNSSVHSFSSQGNNGGGRKSLFAPYLPQANIPELIQEGLV 360
YPS1009_ADF:YDR293C              FNTLEPPAIFQGGHKHRASNSSVHSFSSQGNNGGGRKSLFAPYLPQANIPELIQEGLV 360
CBS6308_AleBeer                   FNTLEPPAIFQGGHKHRASNSSVHSFSSQGNNGGGRKSLFAPYLPQANIPELIQEGLV 360
CBK_Insect_Mosaic:YDR293C         FNTLEPPAIFQGGHKHRASNSSVHSFSSQGNNGGGRKSLFAPYLPQANIPELIQEGLV 360
W303                               FNTLEPPAIFQGGHKHRASNSSVHSFSSQGNNGGGRKSLFAPYLPQANIPELIQEGLV 360
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CBL_InsectMosaic:YDR293C FNTLEPPAIFQQGHKHRASNSSVHSFSSQGNNGGGRKSLFAPYLPQANIPELIQEGRV 360
CBM_InsectMosaic:YDR293C FNTLEPPAIFQQGHKHRASNSSVHSFSSQGNNGGGRKSLFAPYLPQANIPELIQEGRV 360

CH02_IvoryCoast_AVN:YDR293C ----- 188
CH13_IvoryCoast_AVT:YDR293C AGILRVNKKNRSDAWVSTDGALDADIYICGSKDRNRALEGDLVAVELLVDDVWESKKEK 420
YPS1009_ADF:YDR293C AGILRVNKKNRSDAWVSTDGALDADIYICGSKDRNRALEGDLVAVELLVDDVWESKKEK 420
CBS6308_AleBeer AGILRVNKKNRSDAWVSTDGALDADIYICGSKDRNRALEGDLVAVELLVDDVWESKKEK 420
CBK_Insect_Mosaic:YDR293C AGILRVNKKNRSDAWVSTDGALDADIYICGSKDRNRALEGDLVAVELLVDDVWESKKEK 420
W303 AGILRVNKKNRSDAWVSTDGALDADIYICGSKDRNRALEGDLVAVELLVDDVWESKKEK 420
CBL_InsectMosaic:YDR293C AGILRVNKKNRSDAWVCTDGALDADIYICGSKDRNRALEGDLVAVELLVDDVWESKKEK 420
CBM_InsectMosaic:YDR293C AGILRVNKKNRSDAWVCTDGALDADIYICGSKDRNRALEGDLVAVELLVDDVWESKKEK 420

CH02_IvoryCoast_AVN:YDR293C ----- 188
CH13_IvoryCoast_AVT:YDR293C EEKRRKRDASMQHDLIP*----- 437
YPS1009_ADF:YDR293C EEKRRKRDASMQHDLIPLNSSDDYHNDASVTAATSNNFLSSPSSSDSLSKDDLVRKRK 480
CBS6308_AleBeer EEKRRKRDASMQHDLIPNSSDDYHNDASVTAATSNNFLSSPSSSDSLSKDDLVRKRK 480
CBK_Insect_Mosaic:YDR293C EEKRRKRDASMQHDLIPLNSSDDYHNDASVTAATSNNFLSSPSSSDSLSKDDLVRKRK 480
W303 EEKRRKRDASMQHDLIPLNSSDDYHNDASVTAATSNNFLSSPSSSDSLSKDDLVRKRK 480
CBL_InsectMosaic:YDR293C EEKRRKRDASMQHDLIPLNSSDDYHNDASVTAATSNNFLSSPSSSDSLSKDDLVRKRK 480
CBM_InsectMosaic:YDR293C EEKRRKRDASMQHDLIPLNSSDDYHNDASVTAATSNNFLSSPSSSDSLSKDDLVRKRK 480

CH02_IvoryCoast_AVN:YDR293C ----- 188
CH13_IvoryCoast_AVT:YDR293C ----- 437
YPS1009_ADF:YDR293C STINNDSDSLSSPTKSGVRRRSSLKQRPTQKKNDDVEVEGQSLLLVEEEEINDKYKPLYA 540
CBS6308_AleBeer STINNDSDSLSSPTKSGVRRRSSLKQRPTQKKNDDVEVEGQSLLLVEEEEINDKYKPLYA 540
CBK_Insect_Mosaic:YDR293C STINNDSDSLSSPTKSGVRRRSSLKQRPTQKKNDDVEVEGQSLLLVEEEEINDKYKPLYA 540
W303 STINNDSDSLSSPTKSGVRRRSSLKQRPTQKKNDDVEVEGQSLLLVEEEEINDKYKPLYA 540
CBL_InsectMosaic:YDR293C STINNDSDSLSSPTKSGVRRRSSLKQRPTQKKNDDVEVEGQSLLLVEEEEINDKYKPLYA 540
CBM_InsectMosaic:YDR293C STINNDSDSLSSPTKSGVRRRSSLKQRPTQKKNDDVEVEGQSLLLVEEEEINDKYKPLYA 540

CH02_IvoryCoast_AVN:YDR293C ----- 188
CH13_IvoryCoast_AVT:YDR293C ----- 437
YPS1009_ADF:YDR293C GHVVAVLDRIPGQLFSGTLGLLRPSQQANSNNKPPQSPKIAWFKPTDKKVPLIAIPTEL 600
CBS6308_AleBeer GHVVAVLDRIPGQLFSGTLGLLRPSQQANSNNKPPQSPKIAWFKPTDKKVPLIAIPTEL 600
CBK_Insect_Mosaic:YDR293C GHVVAVLDRIPGQLFSGTLGLLRPSQQANSNNKPPQSPKIAWFKPTDKKVPLIAIPTEL 600
W303 GHVVAVLDRIPGQLFSGTLGLLRPSQQANSNNKPPQSPKIAWFKPTDKKVPLIAIPTEL 600
CBL_InsectMosaic:YDR293C GHVVAVLDRIPGQLFSGTLGLLRPSQQANSNNKPPQSPKIAWFKPTDKKVPLIAIPTEL 600
CBM_InsectMosaic:YDR293C GHVVAVLDRIPGQLFSGTLGLLRPSQQANSNNKPPQSPKIAWFKPTDKKVPLIAIPTEL 600

CH02_IvoryCoast_AVN:YDR293C ----- 188
CH13_IvoryCoast_AVT:YDR293C ----- 437
YPS1009_ADF:YDR293C APKDFVENADKYSEKLFVASIKRWPITSLHPFGILVSELGDIHDPDTEIDSILRDNFLS 660
CBS6308_AleBeer APKDFVENADKYSEKLFVASIKRWPITSLHPFGILVSELGDIHDPDTEIDFILRDNFLS 660
CBK_Insect_Mosaic:YDR293C APKDFVENADKYSEKLFVASIKRWPITSLHPFGILVSELGDIHDPDTEIDSILRDNFLS 660
W303 APKDFVENADKYSEKLFVASIKRWPITSLHPFGILVSELGDIHDPDTEIDSILRDNFLS 660
CBL_InsectMosaic:YDR293C APKDFVENADKYSEKLFVASIKRWPITSLHPFGILVSELGDIHDPDTEIDSILRDNFLS 660
CBM_InsectMosaic:YDR293C APKDFVENADKYSEKLFVASIKRWPITSLHPFGILVSELGDIHDPDTEIDSILRDNFLS 660

CH02_IvoryCoast_AVN:YDR293C ----- 188
CH13_IvoryCoast_AVT:YDR293C ----- 437
YPS1009_ADF:YDR293C NEYLDQKNPQKEKPSFQPLPLTAESLEYRRNFTDNEYNIFAISELGWVSEFALHVRNNG 720
CBS6308_AleBeer NEYLDQKNPQKEKPSFQPLPLTAESLEYRRNFTDNEYNIFAISELGWVSEFALHVRNNG 720
CBK_Insect_Mosaic:YDR293C NEYLDQKNPQKEKPSFQPLPLTAESLEYRRNFTDNE*----- 697
W303 NEYLDQKNPQKEKPSFQPLPLTAESLEYRRNFTDNE*----- 697
CBL_InsectMosaic:YDR293C NEYLDQKNPQKEKPSFQPLPLTAESLEYRRNFTDNE*----- 697
CBM_InsectMosaic:YDR293C NEYLDQKNPQKEKPSFQPLPLTAESLEYRRNFTDNE*----- 697

CH02_IvoryCoast_AVN:YDR293C ----- 188

CH13_IvoryCoast_AVT:YDR293C ----- 437
 YPS1009_ADF:YDR293C NGTLELGCHVVDVTSHEEGSSVDRRARKRSSAVFMPQKLVNLLPQSFNDELSLAPGKES 780
 CBS6308_AleBeer NGTLELGCHVVDVTSHEEGSSVDRRARKRSSAVFMPQKLVNLLPQSFNDELSLALARNQ 780
 CBK_Insect_Mosaic:YDR293C ----- 697
 W303 ----- 697
 CBL_InsectMosaic:YDR293C ----- 697
 CBM_InsectMosaic:YDR293C ----- 697

CH02_IvoryCoast_AVN:YDR293C ----- 188
 CH13_IvoryCoast_AVT:YDR293C ----- 437
 YPS1009_ADF:YDR293C ATLSVVYTLDSSTLRKSTWVGESTISPSNLSLEQLDEKLSLSTVQEIARSF 840
 CBS6308_AleBeer PRCRL-FTL* ----- 788

YPS1009_ADF:YDR293C YARRINDPEATLLPTLSLLESLDDEKVKVDLNLDRTLGFVVINEIKRKVNSTVAEKIYT 900
 YPS1009_ADF:YDR293C KLGDLALLRRQMQUIATKMASFRKKIQNFGYNFDNTADELIKGLKIKDDDVRVGIEIL 960
 YPS1009_ADF:YDR293C LFKTMPRARYFIAGKVDPDQYGHYALNLPYIYTHFTAPMRRYADHVHRQLKAVIHDPYT 1020
 YPS1009_ADF:YDR293C EDMEALKITSEYCNFKKDCAYQAQEQAIHLLCKTINDMGNTGQLLTMATVLQVYESSF 1080
 YPS1009_ADF:YDR293C DVFIPEFGIEKRVHGDQLPLIKAEDGTNRVLELHWQPGVDSATFIPADEKNPKSYRNSI 1140
 YPS1009_ADF:YDR293C KNKFRSTAAEIANIELDKEAESEPLISDPLSKELSDLHLTPVNLRLPSAGDNKQNPLEKF 1200
 YPS1009_ADF:YDR293C ISTTETRIENDNYIQEIHQLKIPILLRAEVMALPCLTVRALNPFMKRV* 1250