

Genes and variants	Accession Number	NCBI Refseq	Length (bp)	Protein RefSeq accession	Protein length	Mutations (aa)	mcr location	Species	Host	Country	Authors	PMID	Notes	
mcr-1	KP347127	NG_050417.1	1626	WP_049589868.1	541		Inc2	<i>Escherichia coli</i>	Pig	China	Liu Y, 2016	26603172		
mcr-1.2	KX236309	NG_051170.1	1626	WP_065274078.1	541	Q3L	IncX4	<i>Klebsiella pneumoniae</i>	Human	Italy	Di Pilato V, 2016	27401575		
mcr-1.3	KU934208	NG_052861.1	1626	WP_077064885.1	541	I38V	Inc2	<i>Escherichia coli</i>	Chicken	China	Yang Y, 2016	28242671		
mcr-1.4	KY041856	NG_052664.1	1626	WP_076611062.1	541	D440N	IncX4	<i>Escherichia coli</i>	Unknown - sewage	China	Zhao F, 2016	29118748		
mcr-1.5	KY283125	NG_052663.1	1626	WP_076611061.1	541	H452Y	nd	<i>Escherichia coli</i>	Human	Argentina	Estabrook M, 2016	Unpublished		
mcr-1.6	KY352406	NG_052893.1	1626	WP_077248208.1	541	RS36H	IncP	<i>Salmonella Typhimurium</i>	Human	China	Lu X, 2016	28264851		
mcr-1.7	KY488488	NG_054678.1	1626	WP_085562392.1	541	A215T	IncX4	<i>Escherichia coli</i>	Unknown - sewage	China	Zhao F, 2017	29118748		
mcr-1.8	KY683842	NG_054697.1	1626	WP_085562407.1	541	Q3R	nd	<i>Escherichia coli</i>	Poultry	Brunei	Abdul Momin HF, 2017	Unpublished		
mcr-1.9	KY964067.1	NG_055582.1	1626	WP_099982800.1	541	V413A	IncX4	<i>Escherichia coli</i>	Pig	Portugal	Maneiro V, 2017	30923516		
mcr-1.10	MF176238.1	NG_055583.1	1626	WP_096807442.1	541	M2V/R11C/A235/M155V/M234T/A354T/A443T	IncX4	<i>Moraxella sp</i>	Pig	United Kingdom	AbuOun M, 2017	29091227		
mcr-1.11	KY853650.2	NG_055784.2	1629	WP_099982815.1	542	V7_W8insV	Inc2	<i>Escherichia coli</i>	Human	Peru	Deshpande L, 2018	30917984		
mcr-1.12	LC37868.1	NG_056412.1	1626	WP_104009850.1	541	Q3H	nd	<i>Escherichia coli</i>	Pig	Japan	Nishino Y, 2017	Unpublished		
mcr-1.13	MG384739	NG_057466.1	1626	WP_109545056.1	541	M155I	nd	<i>Escherichia coli</i>	Turkey	Germany	Hammerl JA, 2018	Unpublished		
mcr-1.13 (NOT the same as above)	None	None	1626	541	M2V/S14G		chromosome	<i>nr_ERS1801926</i>	Turkey, Pig	Italy	Alba P, 2018	29951045	Not on fasta file	
mcr-1.14	KX44408.2	NG_057460.1	1626	WP_109545052.1	541	nd	nd	<i>Klebsiella pneumoniae</i>	Chicken	China	Yang Y, 2020	Unpublished		
mcr-1.15	MG763897.1	NG_061610.1	1623	WP_116786830.1	540	nd	nd	<i>Klebsiella pneumoniae</i>	Chicken	China	Xiang R, 2018	Unpublished		
mcr-1.16	MK568462.1	NG_064787.1	1626	WP_136512110.1	541	nd	nd	<i>Escherichia coli</i>	Chicken	China	Zhu Y, 2019	Unpublished		
mcr-1.17	MK568463.1	NG_064788.1	1626	WP_136512111.1	541	nd	nd	<i>Escherichia coli</i>	Cow	China	Zhu Y, 2019	Unpublished		
mcr-1.18	PGLM0100025.1	NG_064789.1	1626	WP_106743337.1	541	nd	nd	<i>Escherichia coli</i>	Chicken	China	Wu C, 2018	Unpublished		
mcr-1.19	MK490674.1	NG_065449.1	1626	WP_129336087.1	541	nd	IncHI2	<i>Salmonella Typhimurium</i>	Egg	China	Hu Y, 2019	Unpublished		
mcr-1.20	LS398440.1	NG_065450.1	1626	WP_140423329.1	541	nd	nd	<i>Escherichia coli</i>	Pig	United Kingdom	APHA, 2018	Unpublished	previously mcr-1.14, including in original GenBank entry	
mcr-1.21	MK965883.1	NG_065451.1	1626	WP_140423330.1	541	nd	nd	<i>Escherichia coli</i>	Human	China	Li C, 2019	Unpublished		
mcr-1.22	MN017134.1	NG_065944.1	1626	WP_148044477.1	541	nd	nd	<i>Escherichia coli</i>	Chicken	Nigeria	Caretto E, 2019	Unpublished		
mcr-1.23	MN873697.1	NG_067235.1	1626	WP_160164897.1	541	nd	nd	<i>Salmonella</i>	Poultry	Bangladesh	Uddin MB, 2020	Preprint https://doi.org/10.1101/2020.03.27.012948		
mcr-1.24	MN879257.1	NG_067236.1	1626	WP_160164898.1	541	nd	nd	<i>Escherichia coli</i>	Poultry	Bangladesh	Uddin MB, 2020	Preprint https://doi.org/10.1101/2020.03.27.012948		
mcr-1.25	MN879259.1	NG_067237.1	1626	WP_160164899.1	541	nd	nd	<i>Escherichia coli</i>	Poultry	Bangladesh	Uddin MB, 2020	Preprint https://doi.org/10.1101/2020.03.27.012948		
mcr-1.26	JAAGS010000042.1	NG_068217.1	1626	WP_034169413.1	541	nd	nd	<i>Escherichia coli</i>	Human	Germany	Neumann B, 2020	Unpublished		
mcr-1.27	JAAGS010000042.1	NG_068218.1	1626	NEU89143.1	541	nd	nd	<i>Escherichia coli</i>	Human	Germany	Neumann B, 2020	Unpublished		
mcr-1.28	LT598652	NG_051171.1	1617	WP_065419574.1	538		IncX4	<i>Escherichia coli</i>	Pig, Calf	Belgium	Xavier BB, 2016	27416887		
mcr-2.1	MUYU01000015.1	NG_055496.1	1617	WP_078254299.1	538		HAQ/V57L/V140F/G320D/A339T/Y359F/G5280/A534T	nd	Pig	Spain	Salva-Serra F, 2017	Unpublished		
mcr-2.2 (same as above)	MF176239.1	NG_055497.1	1617	WP_078254300.1	538		nd	<i>Moraxella pluranimalium</i>	Pig	Spain	AbuOun M, 2017	29012227		
mcr-2.3	NGCO02000011.1	NG_065452.1	1617	TNK10460.1	538		nd	<i>Escherichia coli</i>	Swine	Thailand	Fouts D, 2019	Unpublished		
mcr-3.1	KY924928	NG_055505.1	1626	WP_039026394.1	541		IncHI2	<i>Escherichia coli</i>	Pig	China	Yin W, 2017	28655818		
mcr-3.2	NP2H01000177.1	NG_055523.1	1626	OYE110189.1	541	T488I	nd	<i>Shigella sonnei</i>	Human	Thailand	Fouts D, 2017	Unpublished		
mcr-3.2 (same as above)	NMWW01000143.1	--	--	--	--	--	nd	<i>Escherichia coli</i>	Cattle	Spain	Hernandez M, 2017	28797328		
mcr-3.3	MF495680.1	NG_055783.1	1623	ASU10319.1	540		V122G/R297L/I313V/E337K/H341Y/D358E/G428A/Q468K/T488I/V493M/D494N/A496E/Q500K/K501N/D504A/T505N/S525A/V526I/K529Q/G530E/S535K/V540N	nd	Chicken	China	Ling Z, 2017	Unpublished		
mcr-3.4	FLXA01000011.1	NG_055492.1	1626	WP_065804663.1	541	G373V	nd	<i>Klebsiella pneumoniae</i>	Human	Thailand	Pathogen Informatics, Wellcome Trust Sanger Institute, 2016	Unpublished		
mcr-3.5	MF489760.1	NG_055782.1	1626	WP_089613755.1	541	M23V/A457E/T488I	nd	<i>Escherichia coli</i>	Human	China	Liu L, 2017	Unpublished		
mcr-3.5 (same as above)	MF463699.1	--	--	--	--	--	nd	<i>Escherichia coli</i>	Human	China	Liu L, 2017	Unpublished		
mcr-3.6	MF598076.1	NG_055660.1	1623	WP_042649074.1	540		M13I/D41Y/I71V/S117N/V122G/E139D/R297L/I313V/E337K/H341Y/G428A/L458M/Q468K/T488I/V493M/D494N/A496E/Q500K/K501N/D504N/T505N/S525A/V526I/K529Q/G530E/S535K/V540N	nd	Fish	Germany	Eichhorn I, 2017	29394397		
mcr-3.7	MF598077.1	NG_055661.1	1626	WP_099156047.1	541		M13I/V51A/I71V/V122G/A127V/A154V/Q226K/R297L/I313V/I336V/E337K/H341Y/G428A/L458M/Q468K/V493M/D494N/A496E	nd	Fish	Turkey	Germany	Eichhorn I, 2017	29394397	
mcr-3.8	MF598079.1	NG_055662.1	1623	WP_099156048.1	540		M13I/V122G/R297L/I313V/E337K/H341Y/D358E/G428A/L458M/Q468K/T488I/V493M/D494N/A496E/Q500K/K501N/D504N/T505N/S525A/V526I/K529Q/G530E/S535K/V540N	nd	Fish	Germany	Eichhorn I, 2017	29394397		
mcr-3.8 (same as above)	MF598078.1	--	--	--	--	--	nd	<i>Aeromonas hydrophila</i>	Fish	Germany	Eichhorn I, 2017	29394397		
mcr-3.9	MF598080.1	NG_055663.1	1626	WP_099156049.1	541		M13I/I71V/V122G/E144K/L151I/R297L/I313V/E337K/H341Y/D358E/Q468K	nd	Fish	Germany	Eichhorn I, 2017	29394397		
mcr-3.10	MG214531.1	NG_055799.1	1626	WP_099982820.1	541		V122G/R297L/I313V/E337K/H341Y/D358E/Q468K	Inc2	Duck	China	Wang X, 2017	29203482		
mcr-3.10 (same as above)	MG214533.1	--	--	--	--	--	Inc2	<i>Escherichia coli</i>	Duck	China	Wang X, 2017	29203482		
mcr-3.10 (same as above)	MG214532.1	--	--	--	--	--	Inc2	<i>Proteus mirabilis</i>	Duck	China	Wang X, 2017	29203482		
mcr-3.11	MG489958.1	NG_056184.1	1626	WP_102607465.1	541	G373V/Q468T	nd	<i>Escherichia coli</i>	Unknown	China	Xiang R, 2017	Unpublished		
mcr-3.12	MG564491.1	NG_057484.1	1626	WP_109545070.1	541		IncA/C2	<i>Escherichia coli</i>	Pig	Brazil	Kieffer N, 2018	29712655		
mcr-3.13	MH332763.1	NG_060514.1	1623	WP_111273842.1	540	nd	chromosome?	<i>Aeromonas caviae</i>	Human	China	Shen Y, 2018	29967026		
mcr-3.14	MH332764.1	NG_060515.1	1623	WP_111273843.1	540	nd	chromosome?	<i>Aeromonas bivalvium</i>	Unknown - aquatic environment	China	Shen Y, 2018	29967026		

<i>mcr-3.15</i>	MH332765.1	NG_060516.1	1623	WP_111273844.1	540	nd	chromosome?	<i>Aeromonas media</i>	Chicken	China	Shen Y, 2018	29967026	
<i>mcr-3.16</i>	MH332766.1	NG_060517.1	1623	WP_111273845.1	540	nd	chromosome?	<i>Aeromonas salmonicida</i>	Chicken	China	Shen Y, 2018	29967026	
<i>mcr-3.17</i>	MH332767.1	NG_060518.1	1623	WP_111273846.1	540	nd	chromosome?	<i>Aeromonas allosaccharophila</i>	Chicken	China	Shen Y, 2018	29967026	
<i>mcr-3.18</i>	MH332768.1	NG_060519.1	1623	WP_111273847.1	540	nd	chromosome?	<i>Aeromonas caviae</i>	Unknown - aquatic environment	China	Shen Y, 2018	29967026	
<i>mcr-3.19</i>	NEFW01000046.1	NG_055497.1	1626	WP_087879616.1	541	M23V	nd	<i>Citrobacter freundii</i>	Pig	China	Li XP, 2017	28433744	
<i>mcr-3.20</i>	FLW001000034.1	NG_055493.1	1626	WP_065801616.1	541	D295E	nd	<i>Klebsiella pneumoniae</i>	Human	Thailand	Institute, 2016	Unpublished	Pathogen Informatics, Wellcome Trust Sanger
<i>mcr-3.21</i>	MH371140.1	NG_065453.1	1626	WP_094312656.1	541	nd	Incl1	<i>Klebsiella pneumoniae</i>	Stool	France	Hadjadj L, 2019	31849875	
<i>mcr-3.22</i>	NQCT02000005.1	NG_060581.2	1626	WP_094308975.1	541	nd	nd	<i>Klebsiella pneumoniae</i>	Swine	Thailand	Fouts D, 2017	Unpublished	
<i>mcr-3.23</i>	NQCT01000032.1	NG_060583.1	1626	WP_094313523.1	541	nd	nd	<i>Klebsiella pneumoniae</i>	Human	Thailand	Fouts D, 2017	Unpublished	
<i>mcr-3.24</i>	NQCB01000188.1	NG_060580.1	1626	WP_094321595.1	541	nd	nd	<i>Shigella sonnei</i>	Human	Thailand	Fouts D, 2017	Unpublished	
<i>mcr-3.25</i>	PPTF01000085.1	NG_060585.1	1623	WP_103252528.1	540	nd	nd	<i>Aeromonas veronii</i>	Human	China	Sun Q, 2018	29774212	
<i>mcr-3.26</i>	MH371139.1	NG_065455.1	1626	WP_140423331.1	541	nd	InclII	<i>Klebsiella pneumoniae</i>	Stool	Unknown (USA?)	Hadjadj L, 2019	31849875	
<i>mcr-3.27</i>	MH131694.1	NG_064790.1	1623	WP_017778762.1	540	nd	nd	<i>Aeromonas hydrophila</i>	Human	Malaysia	Chan YX, 2019	Unpublished	
<i>mcr-3.28</i>	MH322737.1	NG_066546.1	1626	WP_150823496.1	541	nd	InclP1	<i>Klebsiella pneumoniae</i>	Stool	Unknown (USA?)	Hadjadj L, 2019	31849875	
<i>mcr-3.29</i>	MKS21074.1	NG_064791.1	1626	WP_136512112.1	541	nd	nd	<i>Escherichia coli</i>	Human	Vietnam	Yang QE, 2019	Unpublished	preprint mcr-3.30 referred to as mcr-3.19 in the manuscript
<i>mcr-3.30</i>	MH536730.1	NG_065456.1	1407	WP_140423332.1	468	nd	chromosome? IncW?	<i>Aeromonas veronii</i>	Feces	India	Ragupathi NKD, 2019	https://doi.org/10.1101/576421	
<i>mcr-4.1</i>	MF543359	NG_055659.1	1626	WP_099156046.1	541		ColE	<i>Salmonella Typhimurium</i>	Pig	Italy	Carattoli A, 2017	28797329	
<i>mcr-4.2</i>	MG459157	NG_057471.1	1626	WP_109545058.1	541	Q331R	nd	<i>Escherichia coli</i>	Pig	Germany	Hammerl JA, 2018	Unpublished	
<i>mcr-4.2</i> (same as above)	MG822663	--	--	--	--	--	nd	<i>Escherichia coli</i>	Pig	Spain	Garcia et al., 2018	29635007	
<i>mcr-4.2</i> (same as above)	MG581979	--	1626 (missing bp. in submitted sequence)	--	--	--	nd	<i>Salmonella Typhimurium</i>	Human	Italy	Carretto E, 2018	29338810	
<i>mcr-4.3</i>	MG026621.1	NG_057461.1	1626	WP_011638903.1	541	V179G/V236F	nd	<i>Enterobacter cloacae</i>	Human	Singapore	Teo JHP, 2018	29237785	mcr-4.3 referred to as mcr-4.2 in the manuscript
<i>mcr-4.4</i>	MG822665.1	NG_057465.1	1626	WP_109545055.1	541	Q331R/P110L	nd	<i>Escherichia coli</i>	Pig	Spain	Garcia et al., 2018	29635007	
<i>mcr-4.5</i>	MG822664.1	NG_057464.1	1626	WP_109545054.1	541	Q331R/H205N	nd	<i>Escherichia coli</i>	Pig	Spain	Garcia et al., 2018	29635007	
<i>mcr-4.6</i>	MH423812 / ERS1801979	NG_061608.1	1626	WP_116786828.1	541	V236F	nd	<i>Salmonella Kedougou</i>	Pig	Spain	Rebelo AR, 2018	29439754	mcr-4.6 referred to as mcr-4.3 in the manuscript
<i>mcr-5.1</i>	KY807921	NG_055658.1	1644	WP_053821788.1	547		ColE	<i>Salmonella Paratyphi B</i>	Chicken	Germany	Borowiak M, 2017	28962028	
<i>mcr-5.2</i>	MG384740	NG_057467.1	1641	WP_109545057.1	546	E234del	ColE?	<i>Enterobacteriaceae</i>	Pig	Germany	Hammerl JA, 2018	29444245	
<i>mcr-5.3</i>	MG886287.1	NG_061405.1	1644	WP_114699278.1	547		nd	<i>Escherichia coli</i>	Horse	Brazil	Fernandes M, 2018	Unpublished	
<i>mcr-5.4</i>	MK965519.1	NG_065945.1	1644	QCT85452.1	547	nd	nd	Unknown	Hospital metagenome		Fleres G, 2019	31504580	mcr-6 referred to as mcr-2.2 in the manuscript
<i>mcr-6.1</i>	MF176340.1	NG_055781.1	1617	WP_099982813.1	538			<i>Moraxella sp.</i>	Pig	United Kingdom	AbuOun M, 2018	29091227	
<i>mcr-7.1</i>	MG267386.1	NG_056413.1	1620	WP_104009851.1	539		InclH2	<i>Klebsiella pneumoniae</i>	Chicken	China	Yang Y, 2018	29912417	
<i>mcr-8</i>	MG736312.1	NG_061399.1	1698	WP_114699275.1	565		InclII	<i>Klebsiella pneumoniae</i>	Pig	China	Wang X, 2018	29970891	
<i>mcr-8.2</i>	MH638291.1	NG_061627.1	1698	WP_072310976.1	565	nd	nd	<i>Klebsiella pneumoniae</i>	Unknown	China	Xiang R, 2018	Unpublished	
<i>mcr-8.2</i> (same as above)	MH921191.1	--	--	--	--	--	nd	<i>Klebsiella pneumoniae</i>	Human urine	China	Qin S, 2018	Unpublished	
<i>mcr-8.2</i> (same as above)	MH703569.1	--	--	--	--	--	nd	<i>Klebsiella pneumoniae</i>	Human sputum	China	Yao Z, 2018	Unpublished	
<i>mcr-8.3</i>	MH598530.1	NG_066547.1	1698	WP_150823497.1	565	nd	InclII	<i>Klebsiella pneumoniae</i>	Stool	France	Hadjadj L, 2019	31849875	
<i>mcr-8.4</i>	MH791448.1	None	1698	AXR70233.1	565	nd	nd	<i>Raoultella ornithinolytica</i>	Chicken	China	Wang X, 2018	Unpublished	
<i>mcr-9.1</i>	MK791138.1	NG_064792.1	1620	WP_001572373.1	539		InclH2	<i>Salmonella Typhimurium</i>	Human	USA	Carroll LM, 2019	31064835	
<i>mcr-9</i> (same as above)	MK070339.1	--	--	--	--	--	InclH2	<i>Escherichia coli</i>		France	Kueffer N, 2019	31206009	
<i>mcr-9</i> (same as above)	MH929594.1.22460	--	--	--	--	--	InclH2	<i>Enterobacter cloacae</i>	Swine feces	China	Zhu Y, 2020	30879063	
<i>mcr-9.2</i>	MT505326.1	None	1623	QDM39449.1	540	nd	nd	<i>Enterobacter hormaechei</i>	Human	China	Feng Y, 2019	Unpublished	
<i>mcr-9.3</i>	MT505326.1	None	1620	QKF95689.1	539	nd	nd	<i>Klebsiella pneumoniae</i>	Human	Portugal	Manageiro V, 2020	Unpublished	
<i>mcr-10.1</i>	MN179494.1	NG_066767.1	1620	WP_023332837.1	539		InclFIA	<i>Enterobacter roggkampii</i>	Human	China	Wei L, 2020	32116151	

Literature overview collected by Ana Rita Bastos Rebelo, DTU Food (updated 22-06-2020)

Legend:
nd: Not determined

Grey: repeated sequence