

Supplementary tables :

Supplementary table 1:

Geographical distribution of KPC-2 and KPC-3 and their most frequent circulating variants. References used to generate the figure 1 are listed.

Supplementary table 2:

Geographical distribution of CAZAVI-resistant KPC-2 and KPC-3 alleles. References used to generate figure 3 are listed.

Supplementary table 3:

List of alleles of KPC involved in resistance to ceftazidime-avibactam including accession Number and references when available.

Supplementary table 1

Country	KPC-variants	References	Date of study/publication
Albania	KPC-3	(1)	2014
Algeria	KPC-2, KPC-3	(2)	2015-2017
		(3)	2013
Argentina	KPC-2, KPC-3	(4)	2012-2014
		(5)	2015-2017
		(6)	2018
Australia	KPC-2, KPC-3	(7)	2009
		(8)	2015
Austria	KPC-2, KPC-3	(4)	2012-2014
		(9)	2013
Brazil	KPC-2, KPC-3, KPC-30	(4, 10)	2012-2014-2017
		(11)	2013-2021
Belgium	KPC-2, KPC-3	(4, 10)	2012-2014
Canada	KPC-2, KPC-3	(12)	2012-2014
		(13)	2013
Chile	KPC-2	(4, 10)	2012-2014-2017
China	KPC-2, KPC-12, KPC-33	(4, 10)	2012-2014-2017
		(14)	2020
		(15)	2016
		(14)	2016-2018
		(16)	2017
Colombia	KPC-2, KPC-3	(4, 10)	2012-2014-2017
		(17)	2006
Croatia	KPC-2	(18)	2012-2014
		(19)	2018-2019
Czech Republic	KPC-2, 3	(4, 10)	2012-2014-2017
		(20)	2018-2019
Ecuador	KPC-2, KPC-4, KPC-5	(21)	2019
		(22)	2021
Egypt	KPC-2	(23)	2017-2018
France	KPC-2, KPC-3	(24)	2016
		(25)	2014
Germany	KPC-2	(26)	2018
		(4, 10)	2012-2014-2017
Greece	KPC-2, KPC-3, KPC-9	(4, 10)	2012-2014-2017
		(27)	2016
India	KPC-2	(28)	2018
Israel	KPC-2, KPC-3, KPC-9	(4, 10)	2012-2014-2017
		(29)	2012
Italy	KPC-2, KPC-3	(4, 10)	2012-2014-2017
		(30)	2017-2018
Japan	KPC-2	(31)	2020
		(4, 10)	2012-2014-2017
Mexico	KPC-2, KPC-3	(32)	2014
		(33)	2010
		(4, 10)	2012-2014-2017
		(34)	2018
Philippines	KPC-2	(4, 10)	2012-2014-2017

		(35)	2015-2018
Poland	KPC-2, KPC-3	(36) (37) (38)	2010-2014 2008-2009 2020
Puerto Rico	KPC-2, KPC-4, KPC-5	(39) (40) (41)	2009 2009 2008
Portugal	KPC-2, KPC-3	(4, 10) (42)	2012-2014-2017 2018-2019
Romania	KPC-2	(4, 10) (43)	2012-2014-2017 2011-2013
Russia	KPC-2, KPC-3	(44) (4, 10) (45)	2011 2012-2014-2017 2019
South Korea	KPC-2, KPC-3, KPC-4	(35) (46) (47) (48)	2015-2018 2014-2015 2017 2013-2015
South Africa	KPC-2	(49) (50)	2011 2019
Spain	KPC-2, KPC-3	(24) (51)	2016 2012-2014
Taiwan	KPC-2, KPC-17	(4, 10) (35) (52) (53)	2012-2014-2017 2015-2018 2014-2015 2011-2013
United Kingdom	KPC-2, KPC-3, KPC-4	(4, 10) (54)	2012-2014-2017 2016
USA	KPC-2, KPC-3, KPC-18	(4, 10) (55) (56) (57)	2012-2014-2017 2020 2018 2018
Venezuela	KPC-2	(4, 10) (45) (58)	2012-2014-2017 2014-2015 2012-2013
Vietnam	KPC-2	(35) (59)	2015-2018 2010-2014
Global view (reviews)		(60) (61) (62)	2014 2017 2011

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Supplementary table 2

Variant	Country	References
KPC-8	Puerto-Rico	(1)
KPC-14	USA	(2)
KPC-25	USA	(3)
KPC-29	Italy	(4)
KPC-31	USA and Italy	(5)
KPC-33	USA	(3)
KPC-35	USA	(6)
KPC-36	Italy	(7)
KPC-39	France	(8)
KPC-40	USA	(9)
KPC-41	Switzerland	(10)
KPC-44	Finland	(11)
KPC-48	Spain	(12)
KPC-49	Italy and Spain	(13)
KPC-50	Switzerland	(14)
KPC-51	China	(15)
KPC-52	China	(15)
KPC-53	Italy	(16)
KPC-57	Greece	(17)
KPC-62 to 65	Italy	(18)
KPC-66	Italy	(19)
KPC-67 to 70	Italy	(4)
KPC-71	China	(20)
KPC-78	China	(21)
KPC-82	USA	(22)
KPC-90	China	(23)
KPC-94 and 95	Spain	(24)
KPC-123	China	(25)

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Supplementary Table 3

KPC-variant^a	PMID	Accession Number
KPC-117*	NA	UNN26047
KPC-36	(1)	MH593787.1
KPC-49	(2)	MN619655.1
KPC-98*	NA	UAZ57792.1
KPC-53	(3)	MUT87649.1
KPC-40	(4)	QRBR01000058.1
KPC-25	(5)	KU216748.1
KPC-112*	NA	UIY90578
KPC-69	(6)	QMU32012
KPC-113*	NA	ULU82276
KPC-73*	NA	QNC69633.1
KPC-66	(6, 7)	QNC69631.1
KPC-94	(8)	QYE52346.1
KPC-35	(9)	MH404098.1
KPC-46*	NA	MH450213.1
KPC-48	(10)	QEO76002
KPC-62	(11)	QKV50745.1
KPC-115*	NA	ULU82668
KPC-72*	NA	QNC69632.1
KPC-39	(12)	MK118771.1
KPC-95	(8)	QYE52347.1
KPC-85*	NA	QTV25836.1
KPC-70	(6)	QMU32028
KPC-88*	NA	QUR41144.1
KPC-78*	NA	QPO25385.1
KPC-86*	NA	QUR41142.1
KPC-51	(13)	QGT31448.1
KPC-57	(14)	QJD09264.1
KPC-76*	NA	QNT35811.1
KPC-32*	NA	MAPO01000050.1
KPC-31	(15)	MAPH01000113.1
KPC-33	(5)	CP025144.1
KPC-90*	NA	QWW21253.1
KPC-65	(11)	QKV50748.1
KPC-52	(13)	QGT31449.1
KPC-68	(6)	QMU31938
KPC-114*	NA	ULU82277
KPC-71*	NA	QOC63221.1
KPC-64	(11)	QKV50747.1
KPC-123	(16)	UNN26644
KPC-107*	NA	UFK32672.1
KPC-108*	NA	UFK32674.1
KPC-104*	NA	UFK32671.1
KPC-106*	NA	UFK32675.1
KPC-74*	NA	QMX41377.1
KPC-23	(17)	MH450213.1
KPC-8	(18)	FJ234412.1

KPC-63	(11)	QKV50746.1
KPC-96*	NA	UAY85936.1
KPC-28	(19)	KY282958.1
KPC-14	(19)	JX524191.1
KPC-87*	NA	QUR41143.1
KPC-84*	NA	QSE38127.1
KPC-44	(20)	MK823188.1
KPC-79*	NA	QPL19131.1
KPC-105*	NA	UFK32673.1
KPC-58*	NA	QJX44695.1
KPC-41	(21)	QBC36180.1
KPC-80*	NA	QQL91944.1
KPC-29	(6)	KY563764.1
KPC-67	(6)	QMU31921
KPC-103*	NA	UFK32670.1
KPC-50	(22)	QGJ02578.1
KPC-82	(23)	QQW39762.1
KPC-97*	NA	UAY85937.1

^aVariants indicated with a star correspond to variants unpublished, but indicated as resistant to CAZavi in the NCBI Nucleotide Database.

^bNA : not applicable

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