

Supplementary Information

VKORC1 mutation in European populations of *Rattus norvegicus* with first data for Italy and the report of a new amino acid substitution.

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Table S1 Exon 3 mutant and not-mutant rats obtained in this work. WT: wild type individual, I123S/Y139F/Y139C/L120Q/A115D: exon 3 mutations.

SAMPLE	YEAR	LOCALITY	COUNTRY	REFERENCE	MUTATION
AICR1	2013	Lungomare Agropoli (SA)	Italy	Castiglia R.	WT
AISR2	2013	Palma di Montechiaro (AG)	Italy	Castiglia R.	WT
AISR3	2013	Marausa (TP)	Italy	Castiglia R.	WT
RSM1	2013	Borgo Maggiore (RSM)	San Marino Republic	Renzi R.	WT
RSM2	2013	Cà Chiavello (RSM)	San Marino Republic	Renzi R.	WT
RSM4	2013	San Giovanni (RSM)	San Marino Republic	Renzi R.	WT
RSM7	2013	Città di San Marino	San Marino Republic	Renzi R.	WT
RSM8	2013	Città di San Marino	San Marino Republic	Renzi R.	WT
RNEM1	2013	Rivoli (TO)	Italy	Mori E.	WT
RNEM2	2013	Rivoli (TO)	Italy	Mori E.	WT
RNEM3	2013	Valpiana (GR)	Italy	Mori E.	WT
RNEM4	2013	Valpiana (GR)	Italy	Mori E.	WT
ANZIO1	2014	Tre Cancelli, Nettuno (RM)	Italy	Castiglia R.	WT
MOR1	2014	Moretta (CN)	Italy	Mori E.	WT
MOR2	2014	Moretta (CN)	Italy	Mori E.	WT
MOR3	2014	Moretta (CN)	Italy	Mori E.	WT
MOR4	2014	Moretta (CN)	Italy	Mori E.	WT
MOR5	2014	Moretta (CN)	Italy	Mori E.	WT
MOR6	2014	Moretta (CN)	Italy	Mori E.	WT
MOR7	2014	Moretta (CN)	Italy	Mori E.	WT
MOR8	2014	Moretta (CN)	Italy	Mori E.	WT
GER1	2014	Gerbole di Rivalta (TO)	Italy	Mori E.	WT

GER3	2014	Gerbole di Rivalta (TO)	Italy	Mori E.	WT
GER4	2014	Gerbole di Rivalta (TO)	Italy	Mori E.	WT
GER5	2014	Gerbole di Rivalta (TO)	Italy	Mori E.	WT
CUORGNE 2	2014	Cuorgnè (TO)	Italy	Mori E.	WT
CUN1	2013	Cuneo (CN)	Italy	Mori E.	WT
CUN2	2013	Cuneo (CN)	Italy	Mori E.	WT
CDV2	2011	Cannevie di Volano (FE)	Italy	Castiglia R.	WT
SOZ1	2014	Teramo (TE)	Italy	Sozio G.	WT
PAL1	2015	Palermo (PA)	Italy	Aloise G.	WT
PAL2	2015	Palermo (PA)	Italy	Aloise G.	WT
PAL4	2015	Palermo (PA)	Italy	Aloise G.	WT
PAL5	2015	Palermo (PA)	Italy	Aloise G.	WT
PAL7	2015	Palermo (PA)	Italy	Aloise G.	WT
FIU1	2015	Fiumefreddo Bruzio (CS)	Italy	Aloise G.	WT
FIU2	2015	Fiumefreddo Bruzio (CS)	Italy	Aloise G.	WT
FIU3	2015	Fiumefreddo Bruzio (CS)	Italy	Aloise G.	WT
FIU4	2015	Fiumefreddo Bruzio (CS)	Italy	Aloise G.	WT
FIU5	2015	Fiumefreddo Bruzio (CS)	Italy	Aloise G.	WT
BEN1	2015	Benestare (RC)	Italy	Aloise G.	WT
BEN2	2015	Benestare (RC)	Italy	Aloise G.	WT
BEN3	2015	Benestare (RC)	Italy	Aloise G.	WT
VALS3	2015	Valsangone-Rivalta (TO)	Italy	Mori E.	WT
VALS5	2015	Valsangone-Rivalta (TO)	Italy	Mori E.	WT
VALS7	2015	Valsangone-Rivalta (TO)	Italy	Mori E.	WT
VALS8	2015	Valsangone-Rivalta (TO)	Italy	Mori E.	WT
VALS9	2015	Valsangone-Rivalta (TO)	Italy	Mori E.	WT
VALS10	2015	Valsangone-Rivalta (TO)	Italy	Mori E.	WT
VALS11	2015	Valsangone-Rivalta (TO)	Italy	Mori E.	WT
VENETO1	2015	Valli Venete- no centri urbani	Italy	Mori E.	I123S
VENETO2	2015	Valli Venete- no centri urbani	Italy	Mori E.	I123S
VENETO3	2015	Valli Venete- no centri urbani	Italy	Mori E.	I123S
VENETO4	2015	Valli Venete- no centri urbani	Italy	Mori E.	I123S

VENETO5	2015	Valli Venete- no centri urbani	Italy	Mori E.	I123S
VENETO6	2015	Valli Venete- no centri urbani	Italy	Mori E.	I123S
VENETO7	2015	Valli Venete- no centri urbani	Italy	Mori E.	WT
VENETO8	2015	Valli Venete- no centri urbani	Italy	Mori E.	WT
BIOP6	2015	Bioparco- Roma	Italy	Fraticegli F.	WT
BIOP7	2015	Bioparco- Roma	Italy	Fraticegli F.	WT
BIOP11	2015	Bioparco- Roma	Italy	Fraticegli F.	WT
BIOP12	2015	Bioparco- Roma	Italy	Fraticegli F.	WT
BIOP13	2015	Bioparco- Roma	Italy	Fraticegli F.	WT
BIOP14	2015	Bioparco- Roma	Italy	Fraticegli F.	WT
MO7		Maputo	Mozambique	Leirs H.	WT
MO13		Maputo	Mozambique	Leirs H.	WT
MO14		Maputo	Mozambique	Leirs H.	WT
MO22		Maputo	Mozambique	Leirs H.	WT
MO23		Maputo	Mozambique	Leirs H.	WT
MO24		Maputo	Mozambique	Leirs H.	WT
MO61		Maputo	Mozambique	Leirs H.	WT
MO194		Maputo	Mozambique	Leirs H.	WT
SA9		Point	South Africa	Leirs H.	WT
SA27		Point	South Africa	Leirs H.	WT
SA34		Durban North	South Africa	Leirs H.	WT
SA38		Durban North	South Africa	Leirs H.	WT
SA44		Durban North	South Africa	Leirs H.	WT
SA47		Durban North	South Africa	Leirs H.	WT
SA178		KwaMashu	South Africa	Leirs H.	WT
TE952		Mawenzi	Tanzania	Leirs H.	WT
TE1671		Kaumba, Morogoro	Tanzania	Leirs H.	WT
TE1675		Kaumba, Morogoro	Tanzania	Leirs H.	WT
TE2909		Mwembesongo, Morogoro	Tanzania	Leirs H.	WT
TUN1	2015	Tunisi	Tunisia	Mori E.	WT
TUN2	2015	Tunisi	Tunisia	Mori E.	WT
RN11	2015	Udon Thani	Thailand	Ribas A.	WT

RN17	2015	Udon Thani	Thailand	Ribas A.	WT
RN21	2015	Udon Thani	Thailand	Ribas A.	WT
RN29	2015	Udon Thani	Thailand	Ribas A.	WT
RN32	2015	Udon Thani	Thailand	Ribas A.	WT
RN35	2015	Udon Thani	Thailand	Ribas A.	WT
RN38	2015	Udon Thani	Thailand	Ribas A.	WT
RN40	2015	Udon Thani	Thailand	Ribas A.	WT
RN79	2015	Udon Thani	Thailand	Ribas A.	WT
BELG1	2013	Flanders-Bruges	Belgium	Baert K.	WT
BELG2	2013	Flanders-Bruges	Belgium	Baert K.	Y139F
BELG3	2013	Flanders-Bruges	Belgium	Baert K.	Y139F
BELG4	2013	Flanders-Bruges	Belgium	Baert K.	Y139F
BELG5	2013	Flanders-Zwevegem	Belgium	Baert K.	Y139F
BELG8	2013	Flanders-Zwevegem	Belgium	Baert K.	Y139F
BELG9	2013	Flanders-Zwevegem	Belgium	Baert K.	WT
BELG11	2013	Flanders-Bruges	Belgium	Baert K.	WT
BELG12	2013	Flanders-Bruges	Belgium	Baert K.	WT
BELG13	2013	Flanders-Brakel	Belgium	Baert K.	Y139F
BELG14	2013	Flanders-Brakel	Belgium	Baert K.	Y139F
BELG15	2013	Flanders-Brakel	Belgium	Baert K.	WT
BELG18	2013	Flanders-Zele	Belgium	Baert K.	Y139F
BELG19	2013	Flanders-Zele	Belgium	Baert K.	WT
BELG20	2013	Flanders-Gand	Belgium	Baert K.	Y139F
BELG21	2013	Flanders-Gand	Belgium	Baert K.	Y139F
BELG24	2013	Flanders-Gand	Belgium	Baert K.	WT
BELG25	2013	Flanders-Zwevegem	Belgium	Baert K.	Y139F
BELG27	2013	Flanders-Lovanio	Belgium	Baert K.	L120Q
BELG28	2013	Flanders-Lovanio	Belgium	Baert K.	L120Q
BELG29	2013	Flanders-Lovanio	Belgium	Baert K.	WT
BELG33	2013	Flanders-Bruges	Belgium	Baert K.	Y139C
BELG35	2013	Flanders-Bruges	Belgium	Baert K.	Y139F
BELG37	2013	Flanders-Lovanio	Belgium	Baert K.	Y139F

BELG45	2013	Flanders–Anversa	Belgium	Baert K.	L120Q
BELG46	2013	Flanders–Tongeren	Belgium	Baert K.	L120Q
BELG47	2013	Flanders–Tongeren	Belgium	Baert K.	L120Q
BELG48	2013	Flanders–Tongeren	Belgium	Baert K.	WT
BELG50	2013	Flanders–Lovanio	Belgium	Baert K.	L120Q
BELG51	2013	Flanders–Mechelen	Belgium	Baert K.	WT
BELG55	2013	Flanders–Mechelen	Belgium	Baert K.	WT
BELG60	2013	Flanders–Mechelen	Belgium	Baert K.	WT
DAN2	2014	Slagelse	Denmark	Eshter A.	Y139C
DAN4	2014	Slagelse	Denmark	Eshter A.	Y139C
FRA1	2014	Zoo La Palmyre, Les Mathes	France	Petit T.	WT
FRA2	2014	Zoo La Palmyre, Les Mathes	France	Petit T.	WT
FRA3	2014	Zoo La Palmyre, Les Mathes	France	Petit T.	WT
FRA4	2014	Zoo La Palmyre, Les Mathes	France	Petit T.	WT
FRA5	2014	Zoo La Palmyre, Les Mathes	France	Petit T.	WT
FRA6	2014	Zoo La Palmyre, Les Mathes	France	Petit T.	WT
FRA7	2014	Zoo La Palmyre, Les Mathes	France	Petit T.	WT
FRA8	2014	Zoo La Palmyre, Les Mathes	France	Petit T.	A115D
FRA9	2014	Zoo La Palmyre, Les Mathes	France	Petit T.	WT
FRA10	2014	Zoo La Palmyre, Les Mathes	France	Petit T.	Y139F
FRA37	2014	Le Puy-en-Velay	France	Eshter A.	WT
FRA38	2014	Le Puy-en-Velay	France	Eshter A.	WT
MARS1	2015	Marseilles	France	Mori E.	WT
MARS2	2015	Marseilles	France	Mori E.	WT
MARS3	2015	Marseilles	France	Mori E.	WT
PORT1	2010	São Miguel Island, Azores	Portugal	Eshter A.	WT
PORT2	2010	São Miguel Island, Azores	Portugal	Eshter A.	WT
PORT3	2010	São Miguel Island, Azores	Portugal	Eshter A.	WT
PORT4	2010	São Miguel Island, Azores	Portugal	Eshter A.	WT
OLA1		Hilversum	the Netherlands	Eshter A.	WT
OLA2		Albergen	the Netherlands	Eshter A.	WT
OLA3		Albergen	the Netherlands	Eshter A.	WT

OLA4		Deurningen	the Netherlands	Eshter A.	WT
OLA5		Deurningen	the Netherlands	Eshter A.	WT
LESFRA2	2013	Les Franqueses del Vallès	Spain	Ribas A.	WT
UNG1	2007	Budapest	Hungary	Eshter A.	WT
UNG2	2007	Budapest	Hungary	Eshter A.	WT
UNG3	2007	Budapest	Hungary	Eshter A.	WT
PAK1	2014	Karachi	Pakistan	Mori E.	WT
PAK2	2014	Karachi	Pakistan	Mori E.	WT
YEM1	2014	Sana'a	Yemen	Mori E.	WT
YEM2	2014	Sana'a	Yemen	Mori E.	WT
IRAQ1	2014	Bagdad	Iraq	Mori E.	WT
LIB1	2014	Beirut	Lebanon	Mori E.	WT
LIB2	2014	Beirut	Lebanon	Mori E.	WT
LIB3	2014	Beirut	Lebanon	Mori E.	WT
LIB4	2014	Beirut	Lebanon	Mori E.	WT
