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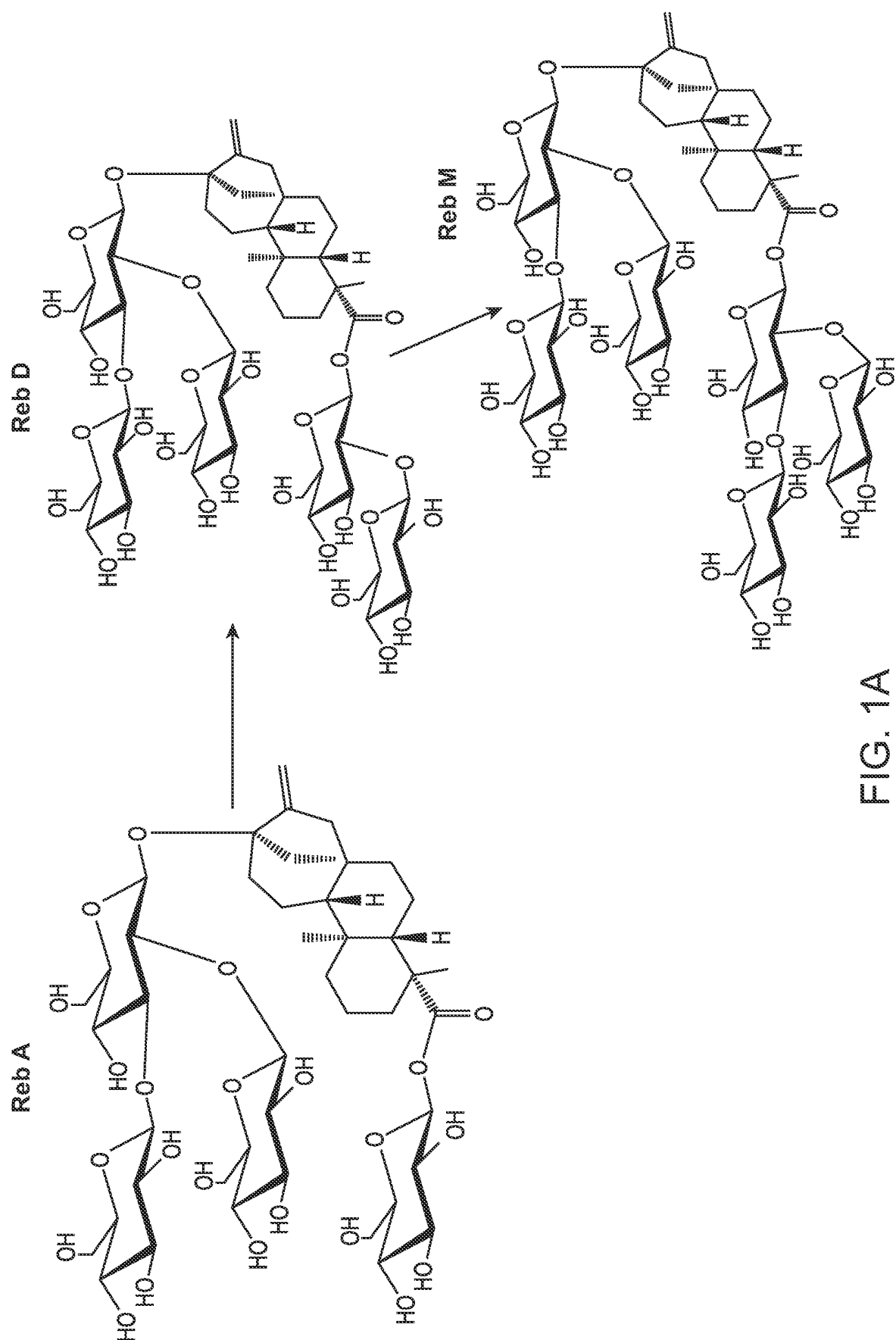
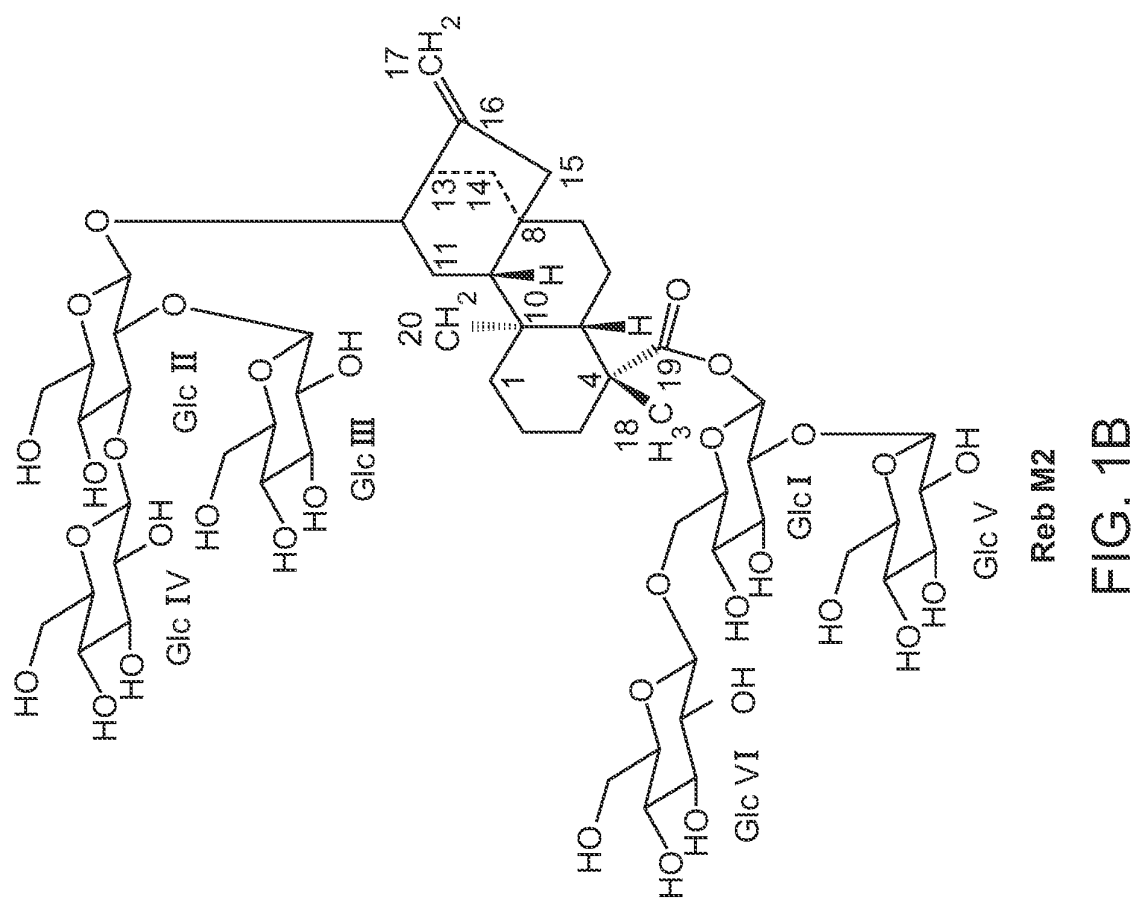


FIG. 1A

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Reb M2

FIG. 1B

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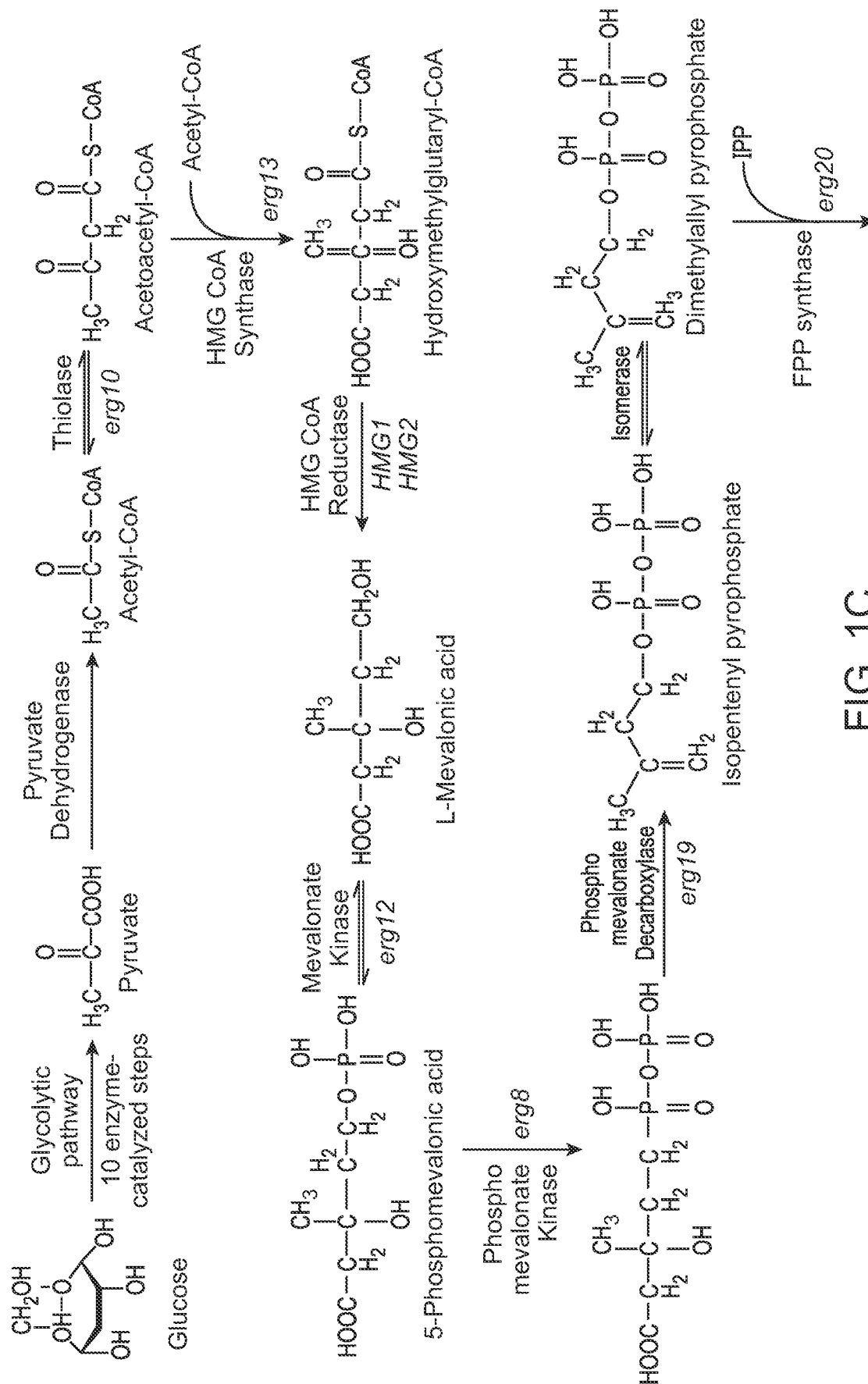


FIG. 1C

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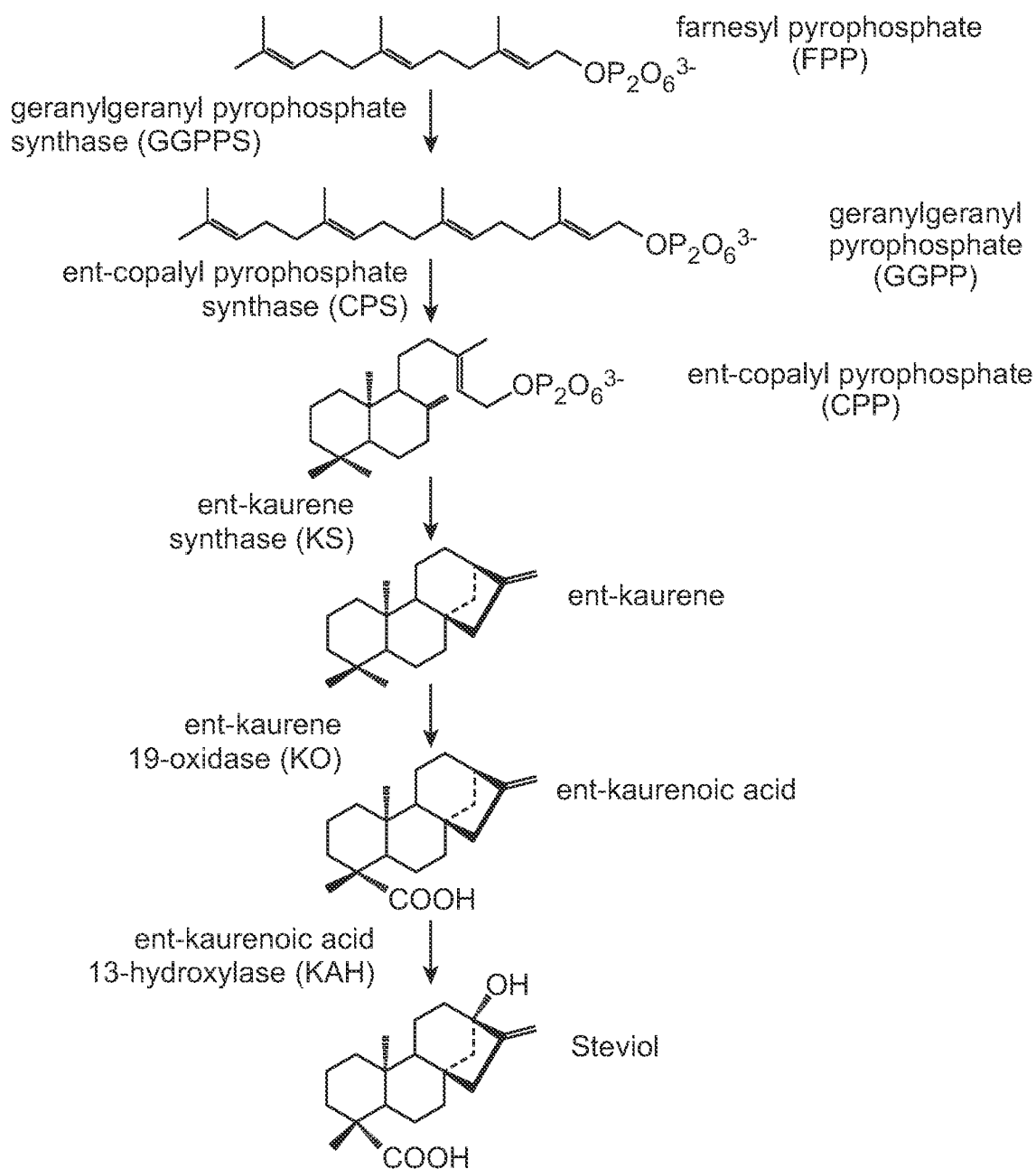
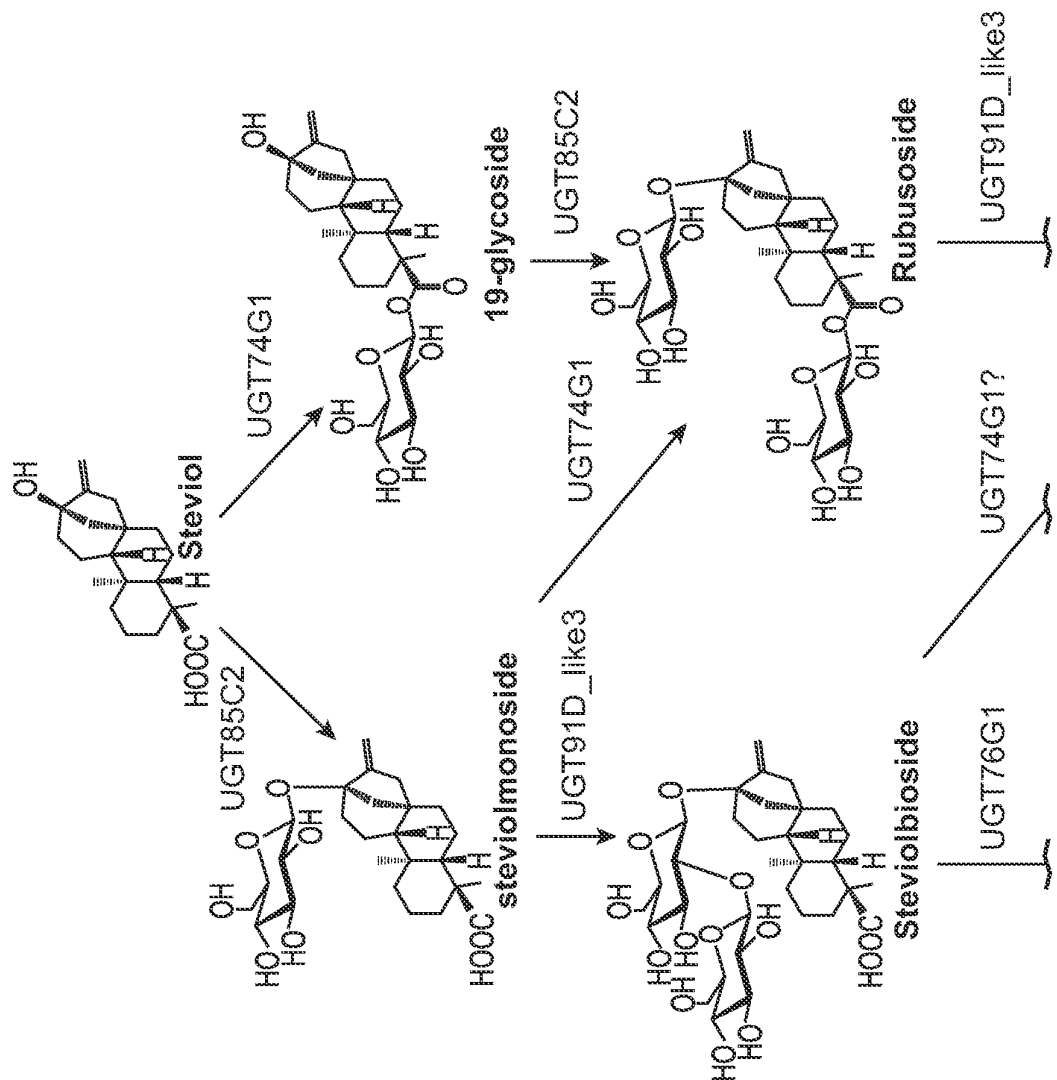


FIG. 2A



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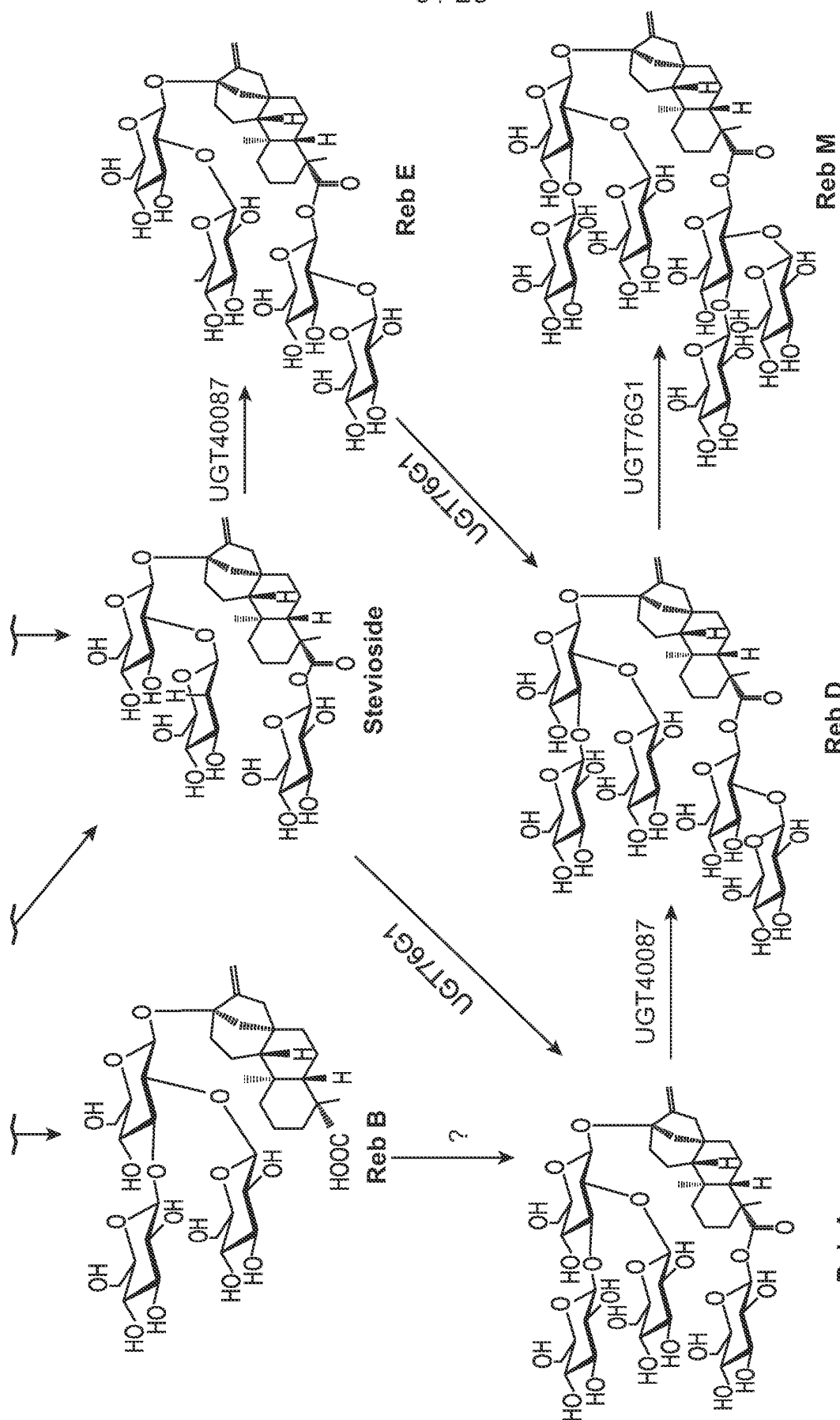


FIG. 2B (Cont.)

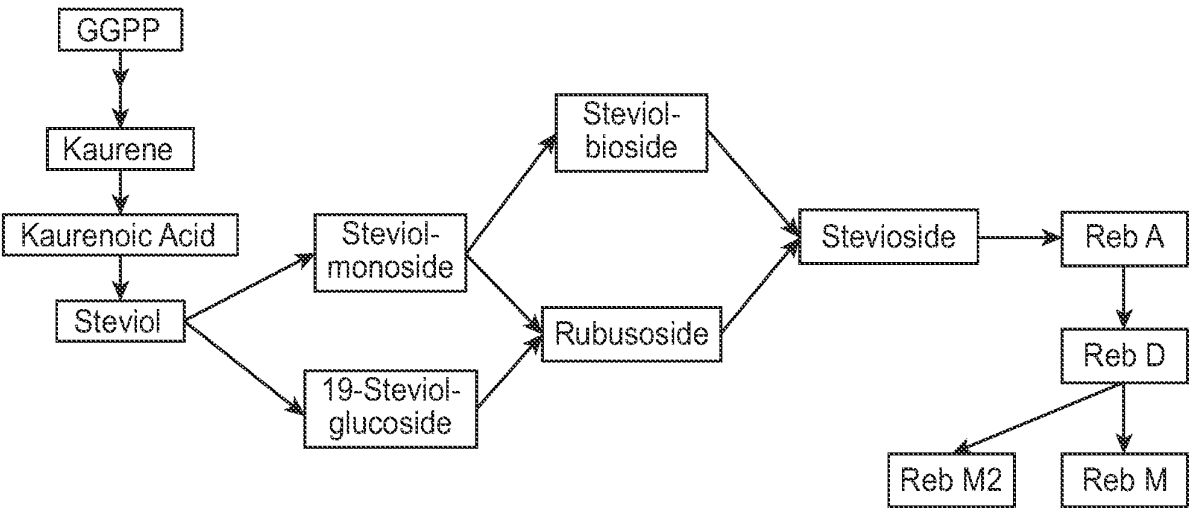


FIG. 2C

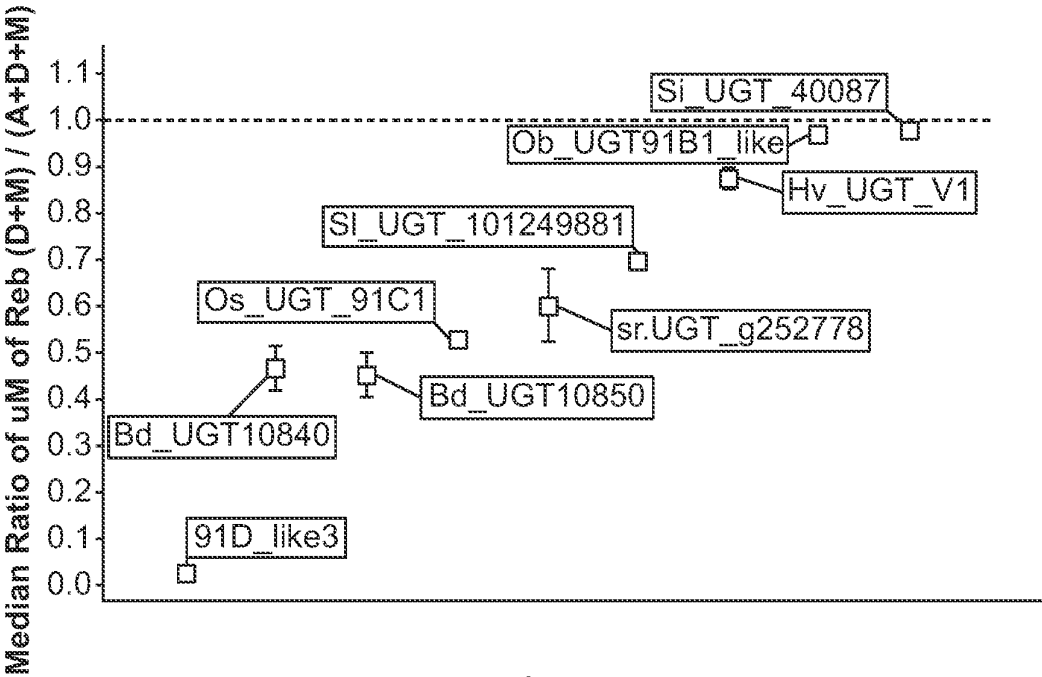


FIG. 3

Down Stream ALG1 ORF	PGAL1	F-Cph1 cut sequence	terminator	Down Stream ALG1 ORF
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FIG. 4

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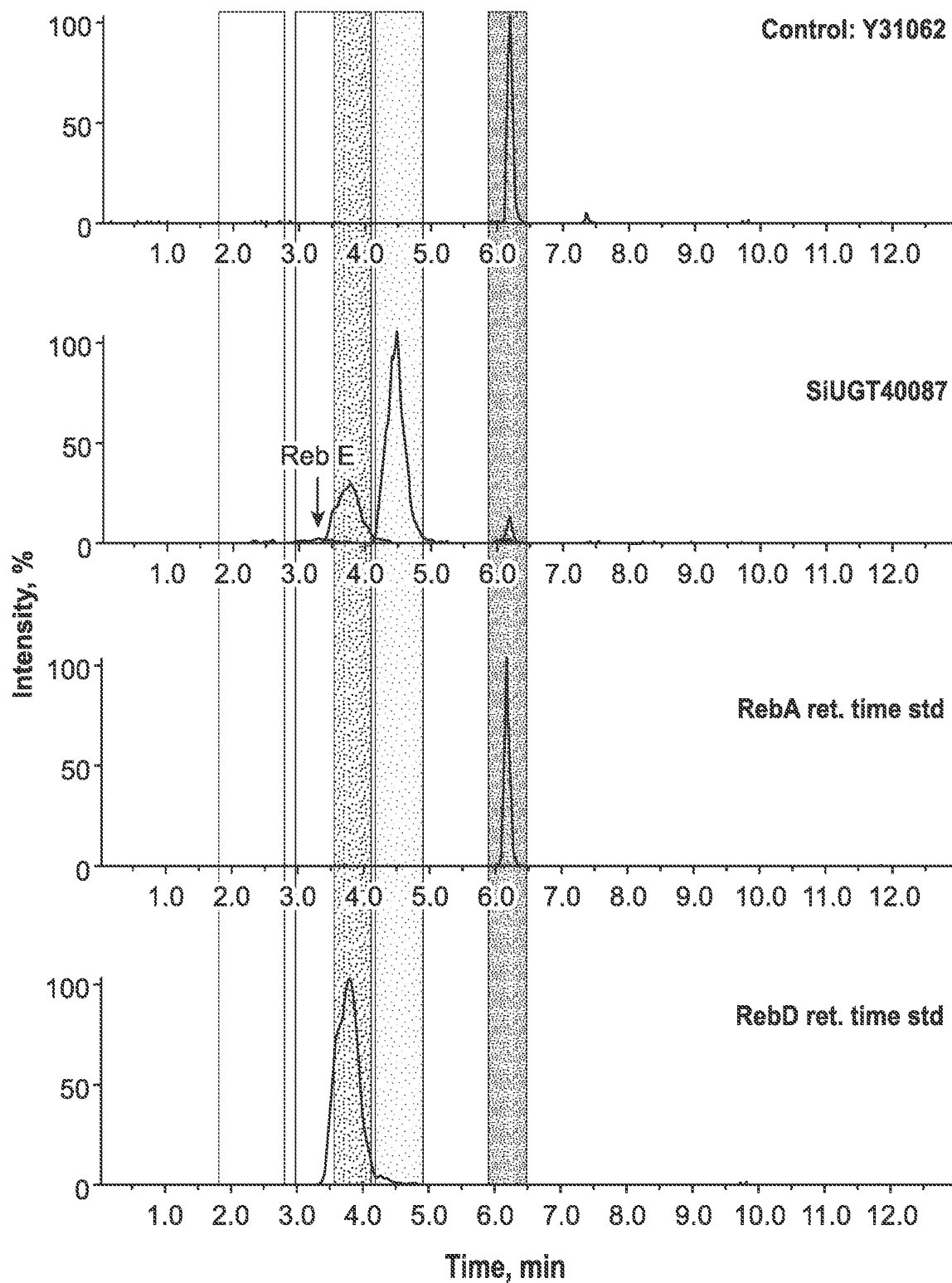


FIG. 5A

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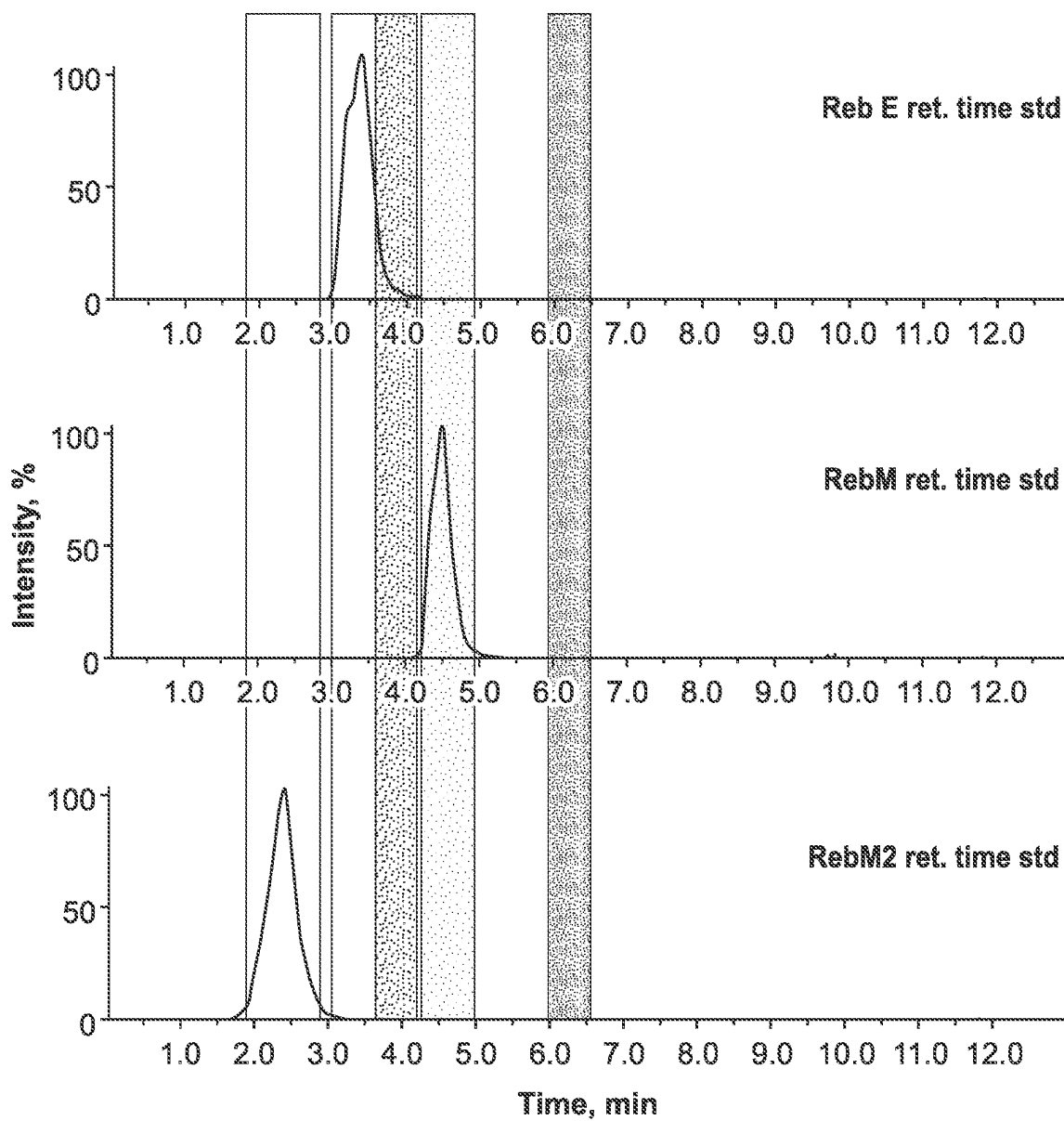


FIG. 5A (Cont.)

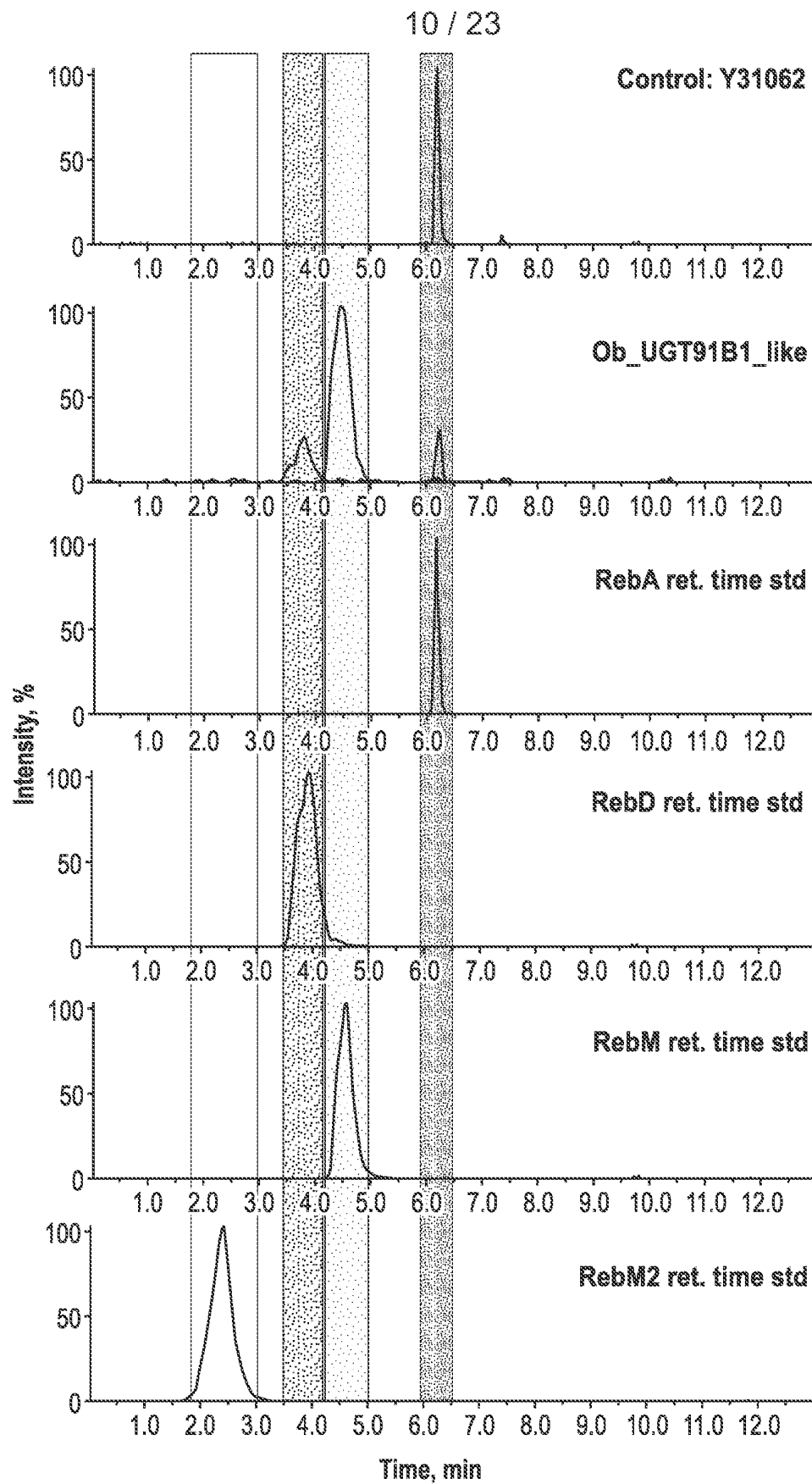


FIG. 5B

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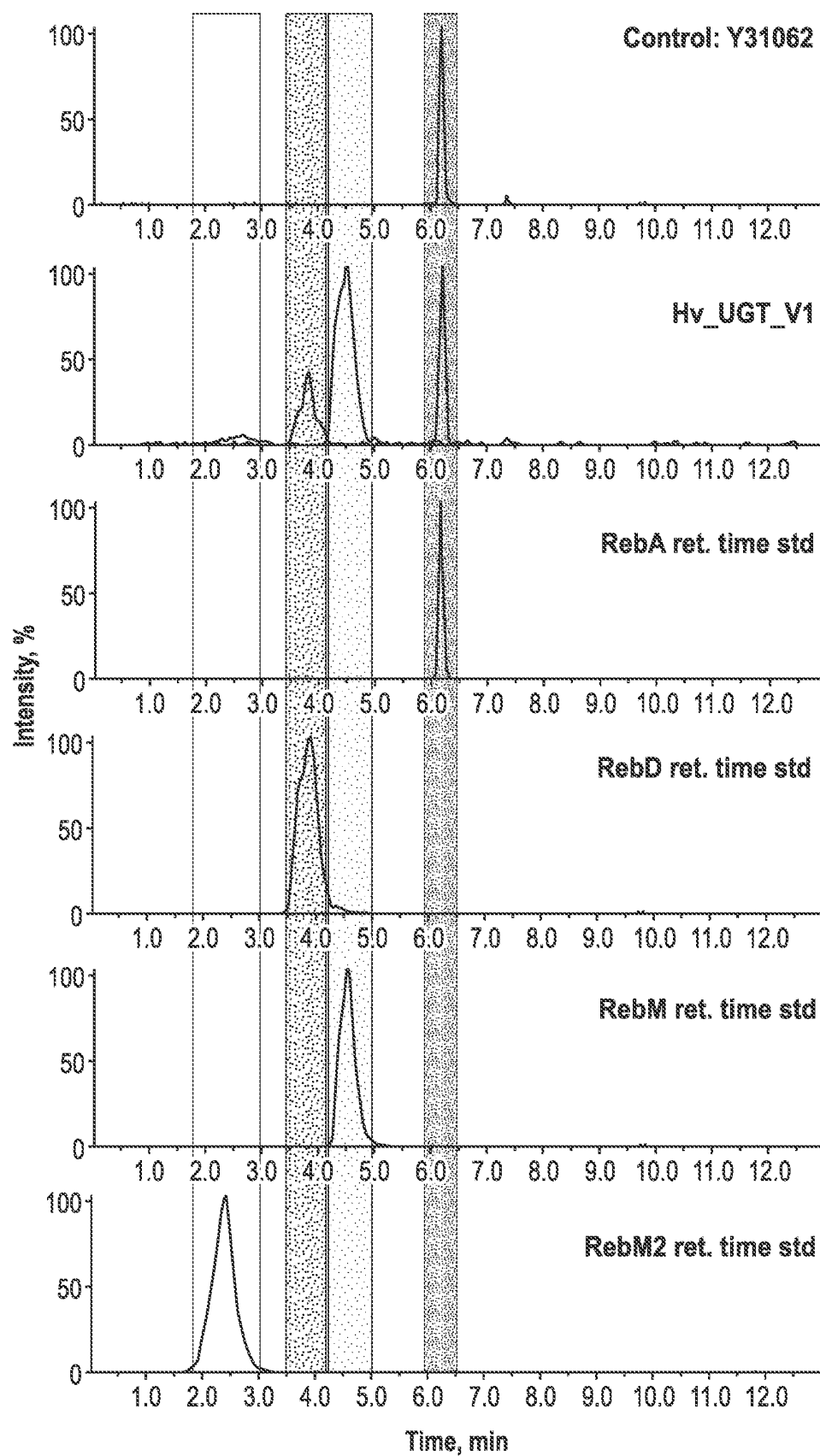


FIG. 5C

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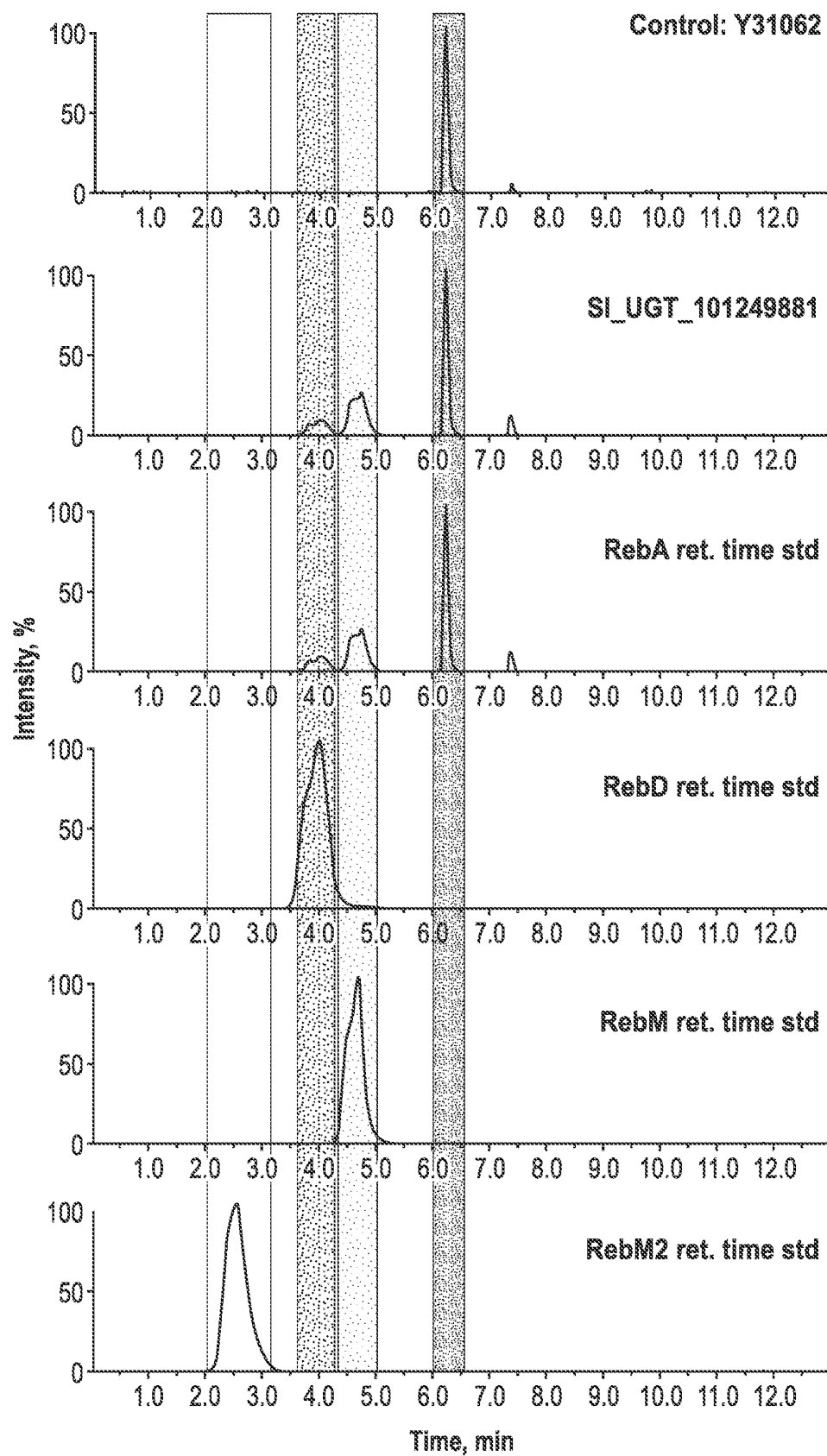


FIG. 5D

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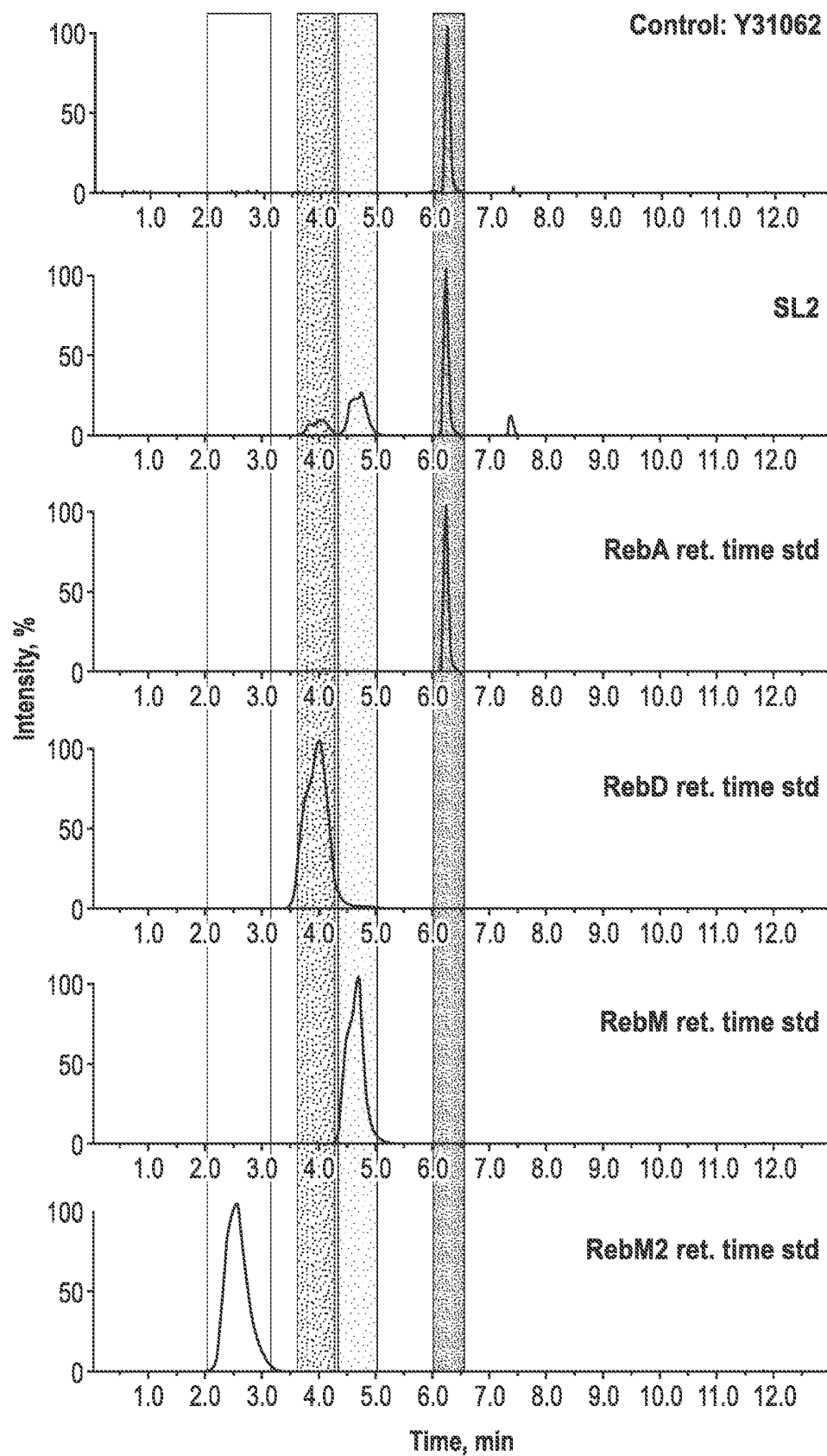


FIG. 5D (Cont.)

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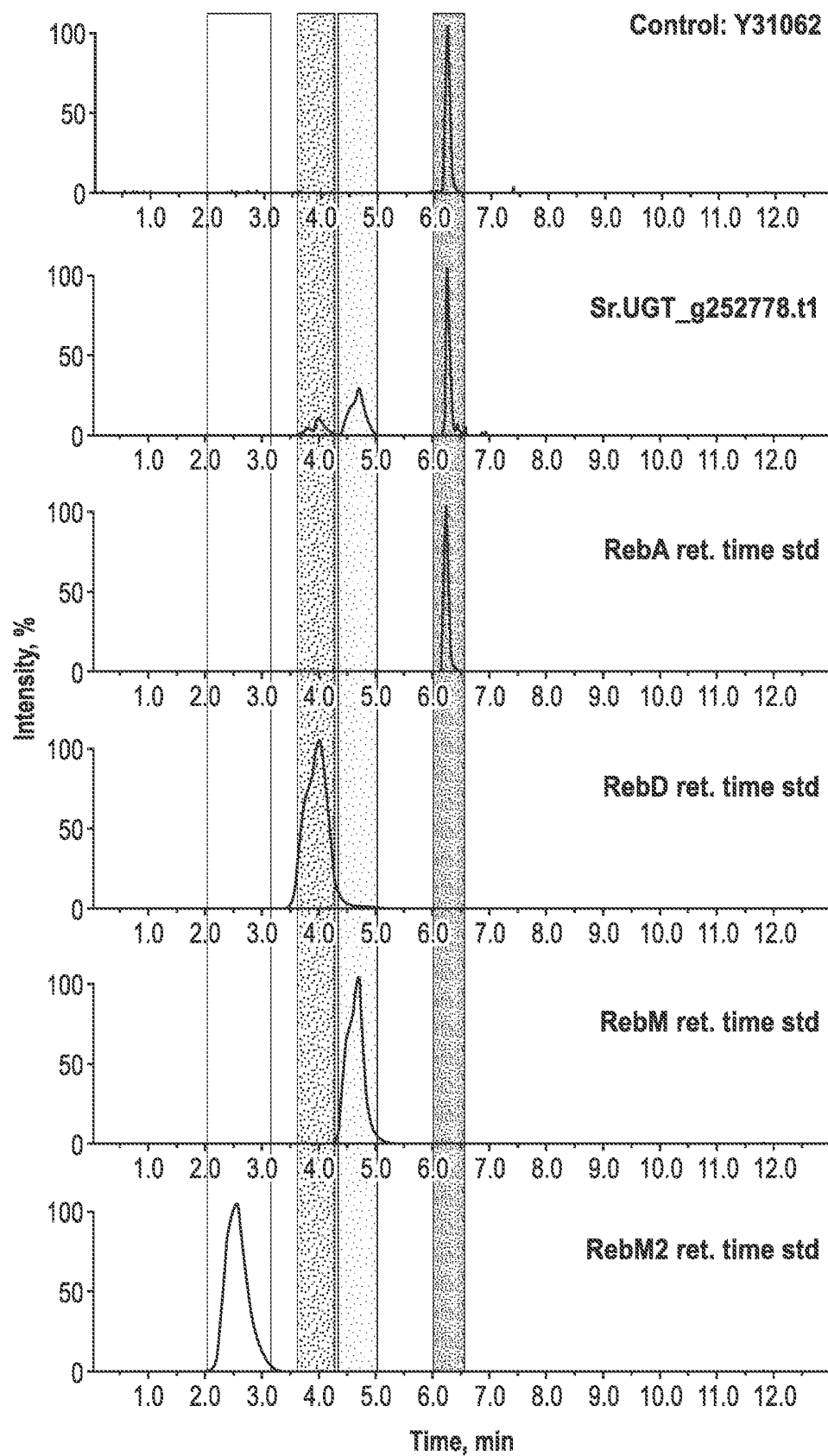


FIG. 5E

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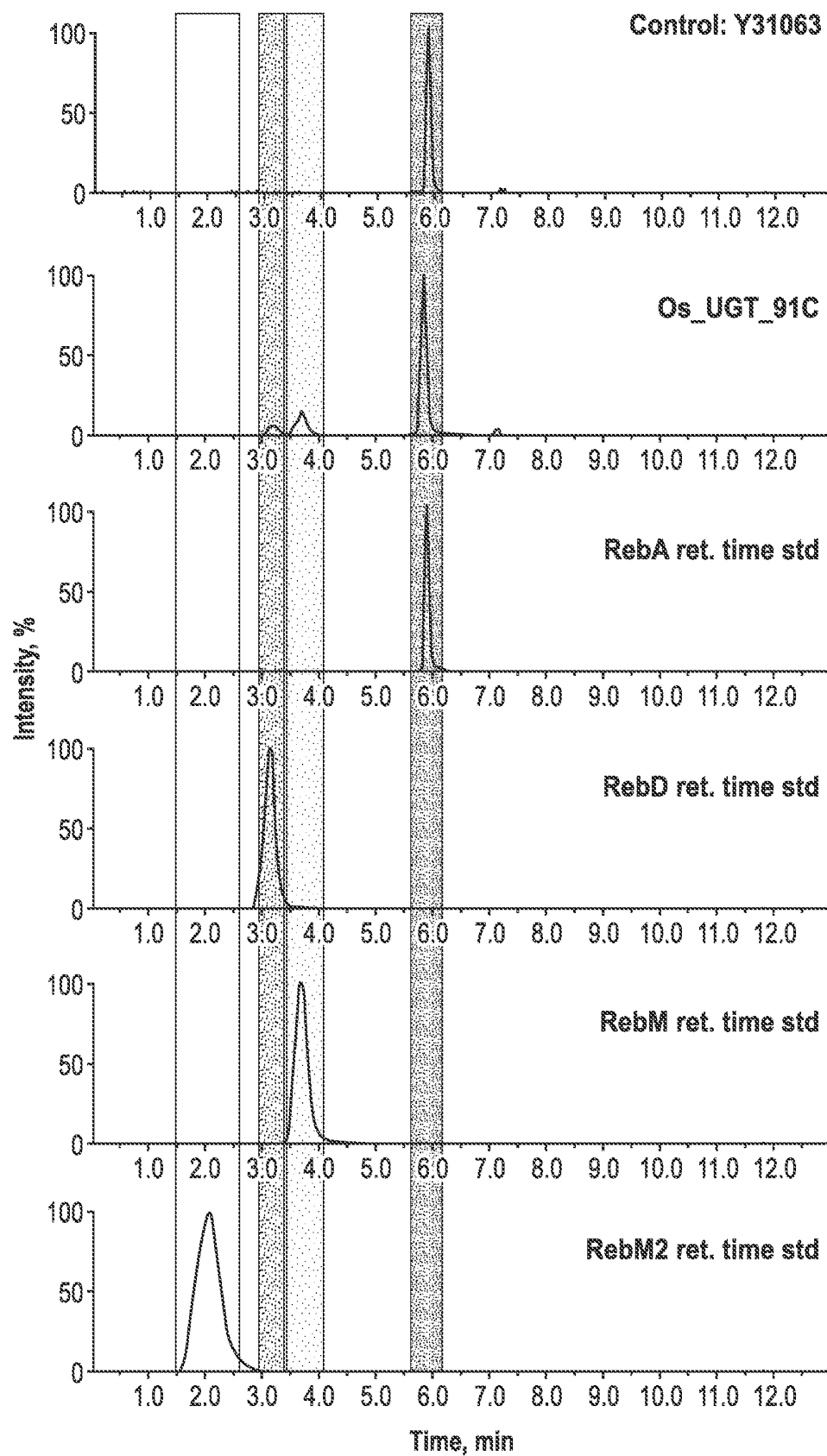


FIG. 5F

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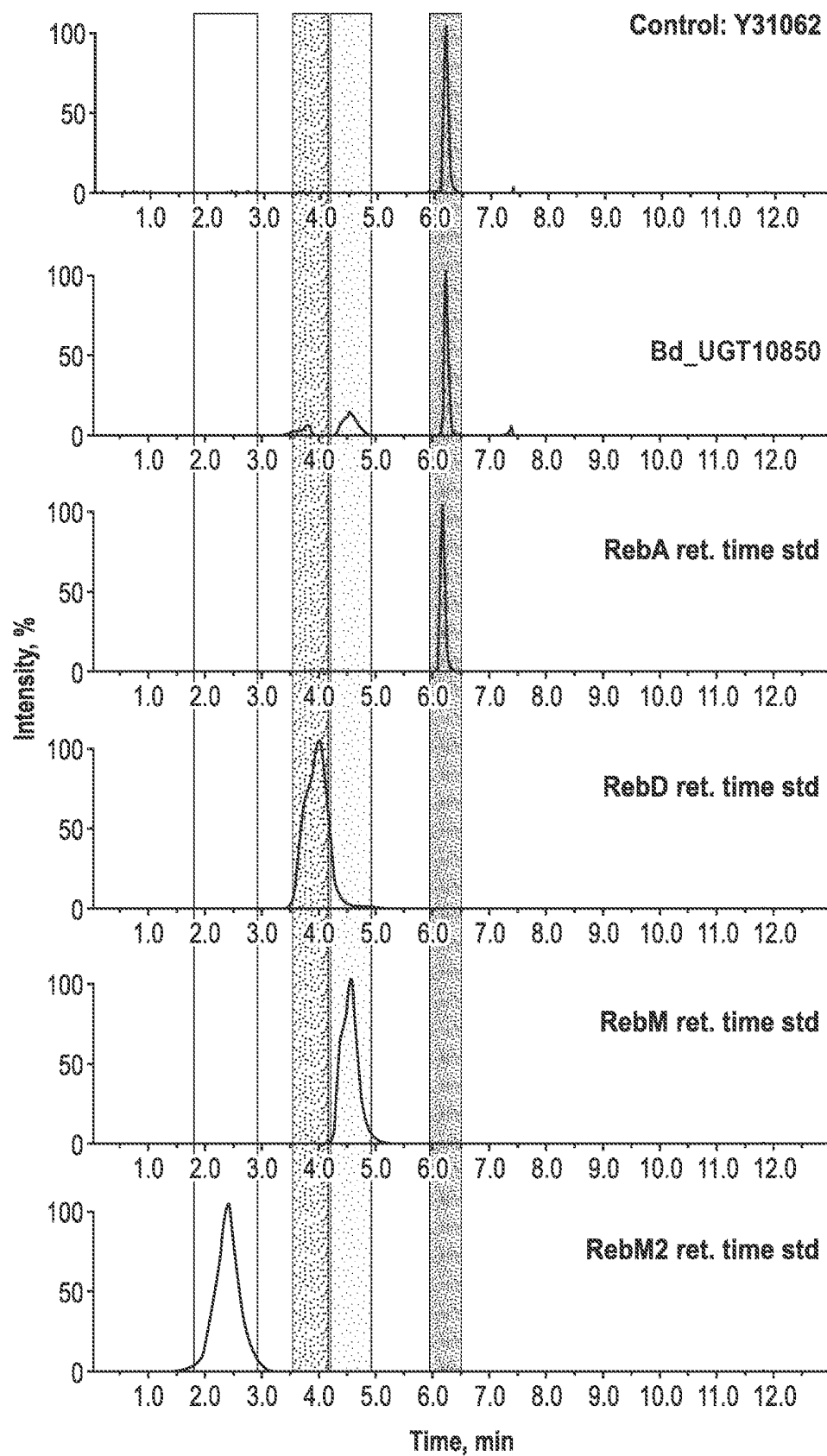


FIG. 5G

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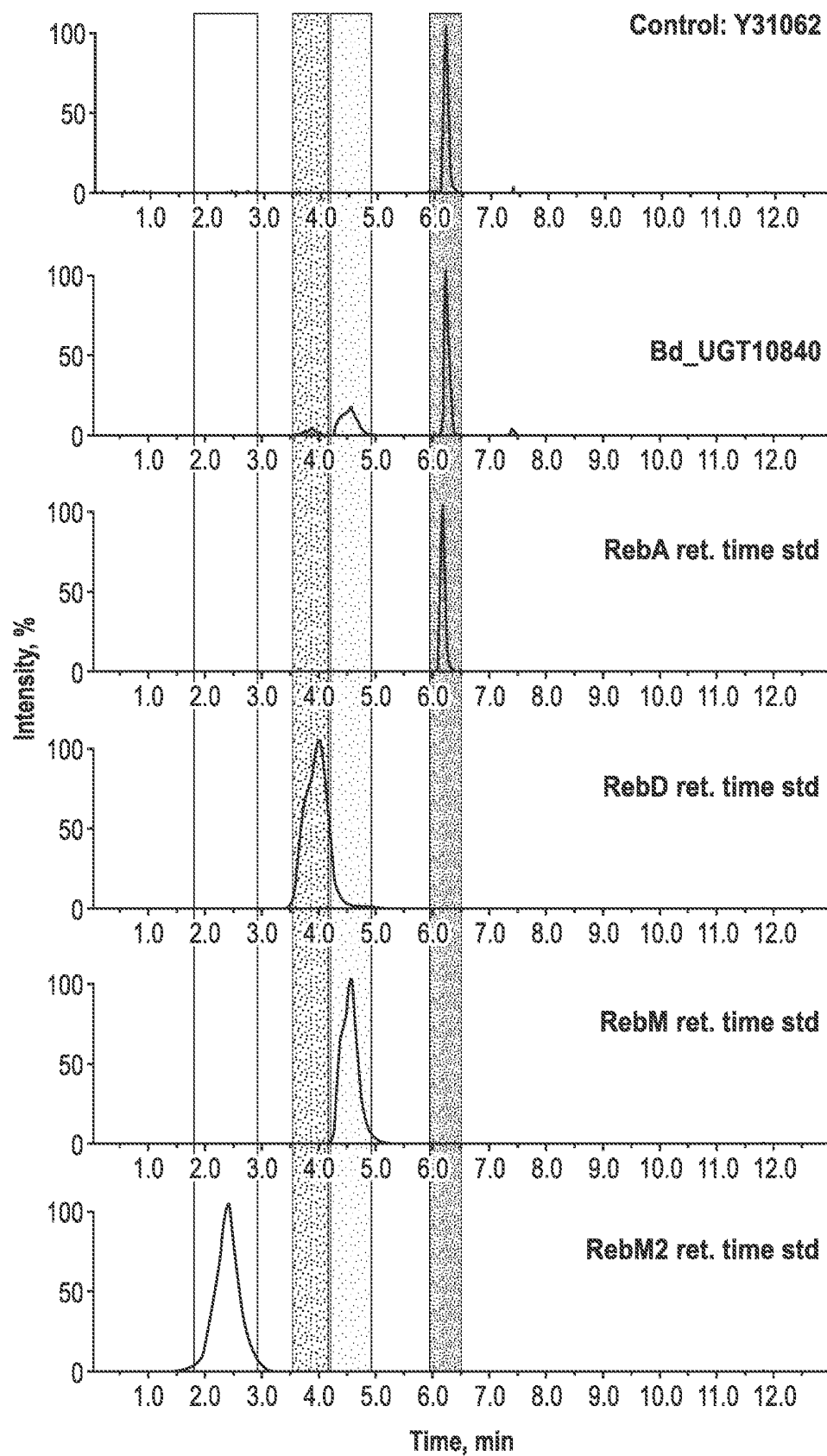


FIG. 5H

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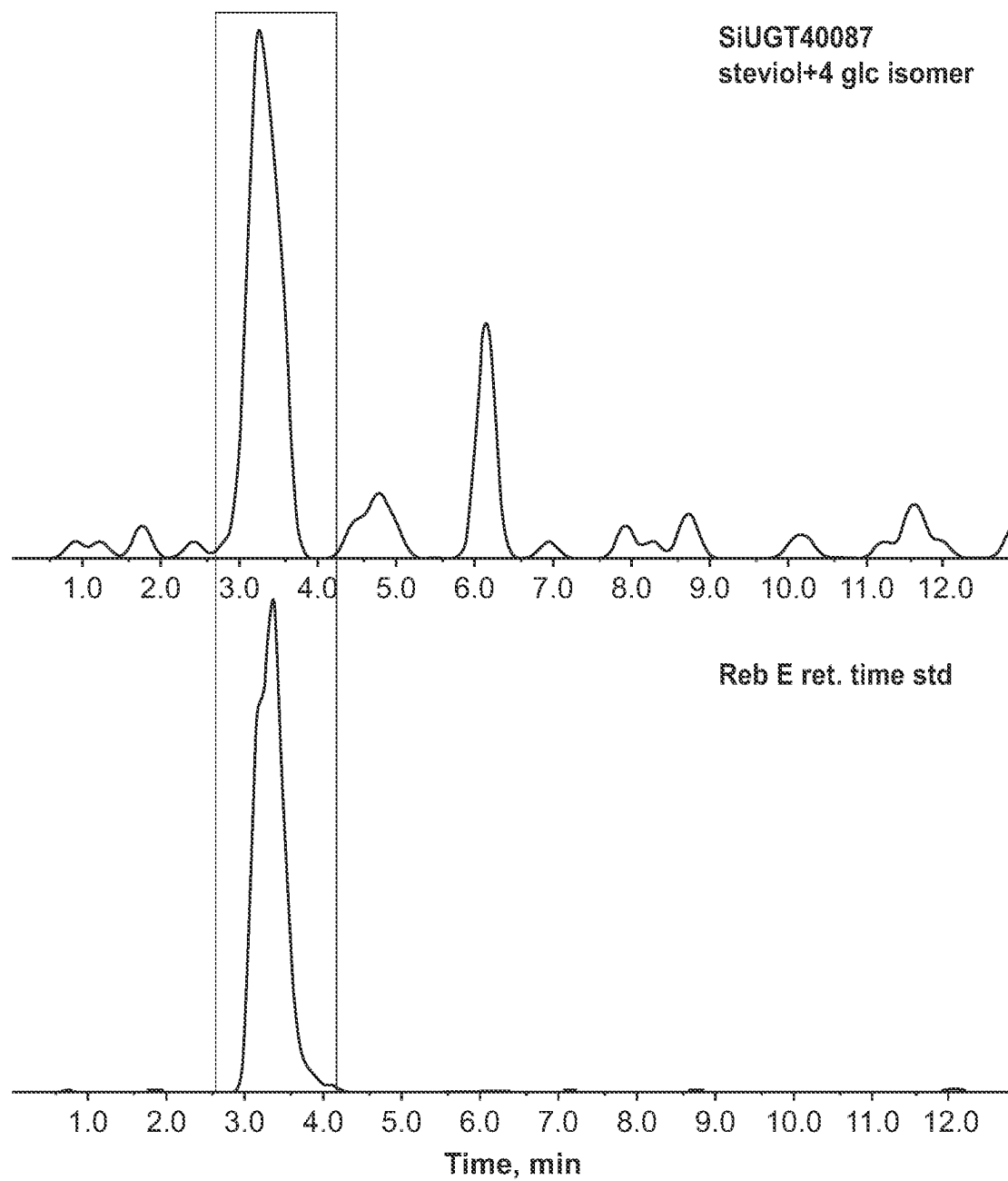


FIG. 5I

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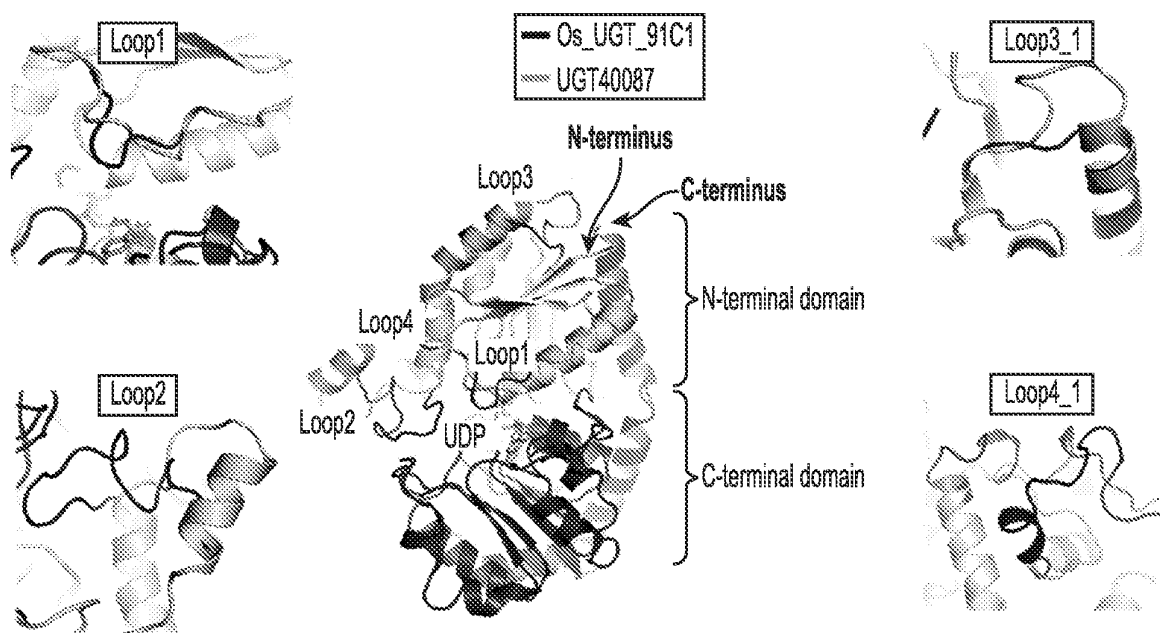


FIG. 6

UGT40087	IPYG ₂₁₄	215LVPP	UGT40087
Si91Dlike	IQYG ₂₁₅	216LVPP	Si91Dlike
Os_UGT_91C1	TFLG ₂₄₆	247LMPP	Os_UGT_91C1
91Dlike3	VPVG ₂₆₀	261LLPP	91Dlike3
UGT40087	IPYG ₂₁₄	216LVPP	Si91Dlike
UGT40087	IPYG ₂₁₄	247LMPP	Os_UGT_91C1
UGT40087	IPYG ₂₁₄	261LLPP	91Dlike3

FIG. 7

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	1	10	20	30	40	
UGT40087	MDASSSPL	IVIE	MA	AS	E AERL AR R V	
Os UGT 91C1	MDSGYSSSYAAAA	GM VVIC	MA	PC	D AORL SR R V	
91Dlike3	MYNVTYHQNSKAMATSDS	IVDDRKQL	VATE	MA	PC O SKLI EK R V	
Si91Dlike	MDSSQS	SPPL	IAVE	MA	PC E AERL AR R V	
	50	60	70	80	90	
UGT40087	P N S RPVPPEALA	IDF A P	PP DC	DG A S	IPP GK...TELHLK L	
Os UGT 91C1	P N S RPVPPEALA	IDF A P	PP DC	DG A S	IPP GKPDMLVELHLK F	
91Dlike3	T N O SS...HIS	INV Q T	PP OE	ED A T	VHPED...IPYLKK S	
Si91Dlike	T I S RPVPIALA	IDF A P	PP DC	DG A S	IPP GK...TDLHLK L	
	100	110	120	130	140	150
UGT40087	AAPFAA	DAACADGSTNKV	LEF	NEOY AAAA	ADHKIPC	LNLTFAASTS EYGV
Os UGT 91C1	AAPFSE	GTACA.....	VIV	VEHH AAAA	LEHKVPC	MMLGSAHMI SIADR
91Dlike3	QPEVTR	LECHSP.....	IIY	YTHY LPSI	ASLGISR	HFSVTTPWAI YMGPS
Si91Dlike	AAPFAA	DAACADGSTNKV	LEV	SEOY AAAA	ADRKIPC	LILPFASSTL EFGVP
	160	170				
UGT40087	RV.....E	PVDGSTA ILO F				
Os UGT 91C1	RLERAETESPAAGQGRPAA.....A	TFEVARMKLIRTKGSSGM LAE F				
91Dlike3	.ADA.....MINGS DGRTTVEDLTTE	KWFPPPTKVCWRKHDLARLV PYKAPGI DGY M				
Si91Dlike	RL.....E	PVEGSTA ILO F				
	180	190	200	210	220	230
UGT40087	V TLEKCOFVIQRA	CE LEPEPL	SDIFGK	VIPY	V	CPPAEGHKREHGNAAIS
Os UGT 91C1	S TLRSSSLVVGRCV	FEPETV	STLRGK	ITFL	M	HLH...EGRREDGEDATVP
91Dlike3	G VLKGS DCLLSKCYH	EGTOWL	ETLHQV	VVPV	L	EIPGDEKD.ETWVSIKK
Si91Dlike	V TFEKCOLVIHRACS	LEPEHI	PGIFGK	VIOY	V	CPPAQGHIL EHDNAALS
	240	250	260	270	280	290
UGT40087	KOOPE	LFILGS	PPVTVEQLH	I	SGA	ATI L LK N LLLEA GDI P
Os UGT 91C1	AQPAK	VYV LGS	VPLGVEKVH	I	SGA	ATR L LR T V...S ADL A
91Dlike3	GKQKG	VYV LGS	VLVSQTEVV	L	SGA	S LE V YR K PA KS SVE D
Si91Dlike	KOOPE	LFILGS	PPVTVEQLH	I	SGA	ATI L LK N LLLEA GDI P
	300	310	320	330	340	350
UGT40087	E	D L AMG V	PI	A	SS GA	C WA TI V S MLE TFLDE R
Os UGT 91C1	E	D L AMG V	PI	A	SS GA	C WA TI V S MLE TFLDE R
91Dlike3	E	D L AMG V	PI	A	SS GA	C WA TI V S MLE TFLDE R
Si91Dlike	E	D L AMG V	PI	A	SS GA	C WA TI V S MLE TFLDE R
	360	370	380	390	400	410
UGT40087	I	O I R KA LRVP	REK	SYDROGI	GAI A	MC E SKSVFA N KKMQE VS R
Os UGT 91C1	P	R I A NA LQVA	NDG	SFDREGV	AAI A	AV E SSKVFO K KKLQE VA M
91Dlike3	L	R I L D QV IEIP	NEE	CLTKESV	RSL S	VV K GEIYK N RELSK YN T
Si91Dlike	I	O I R KA LRVP	REK	SYDROGI	GAI A	MC E SKSVFA N KKMQE IN R
	420	430				
UGT40087	NCQEK	IDELIQR GSFEK.....				
Os UGT 91C1	ACHER	IDGETIQ RSYKD.....				
91Dlike3	KVEKE	VSQFVDY EKNAVAIDHES				
Si91Dlike	KCOER	IDELIQR RSFEK.....				

FIG. 8

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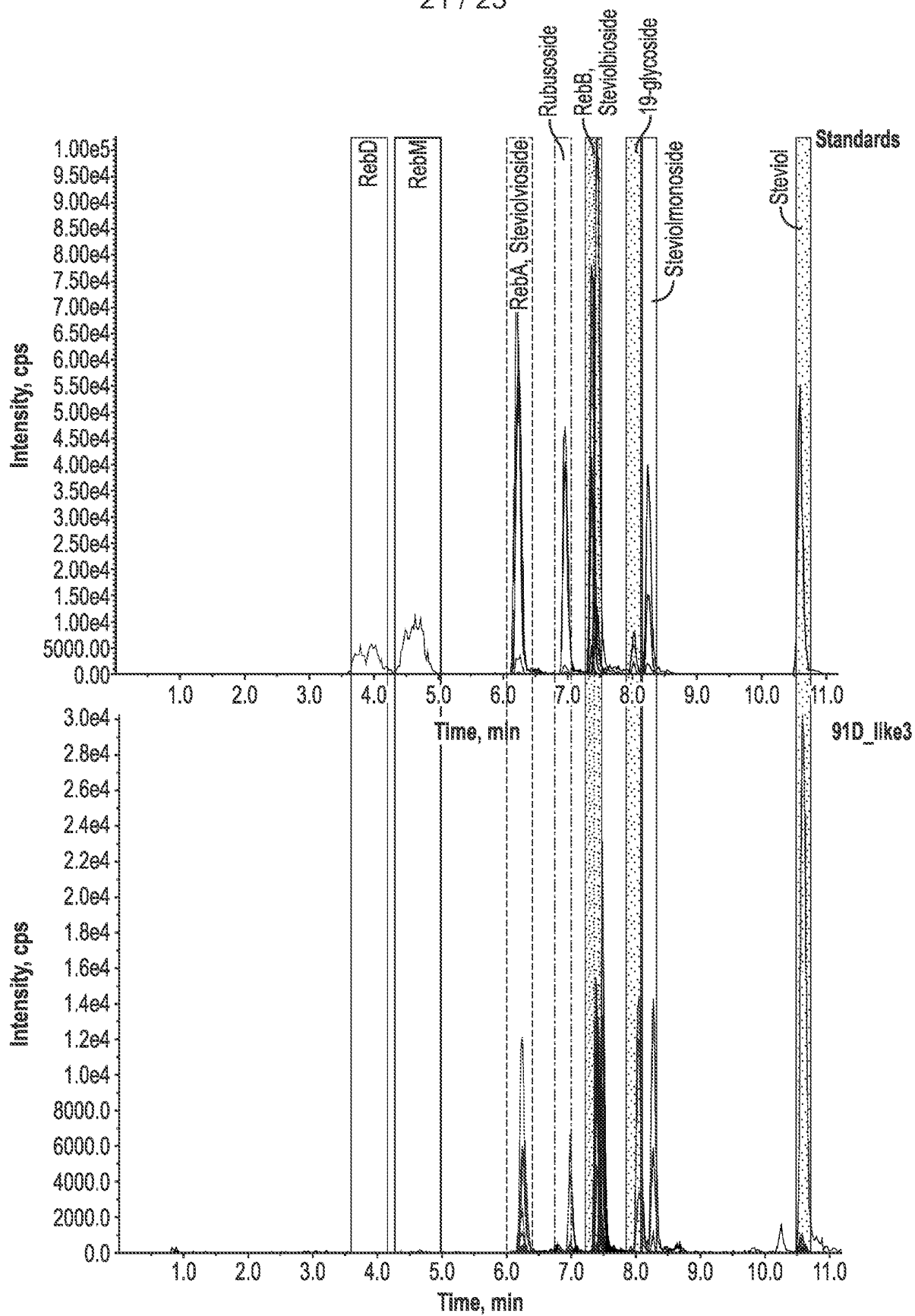


FIG. 9A

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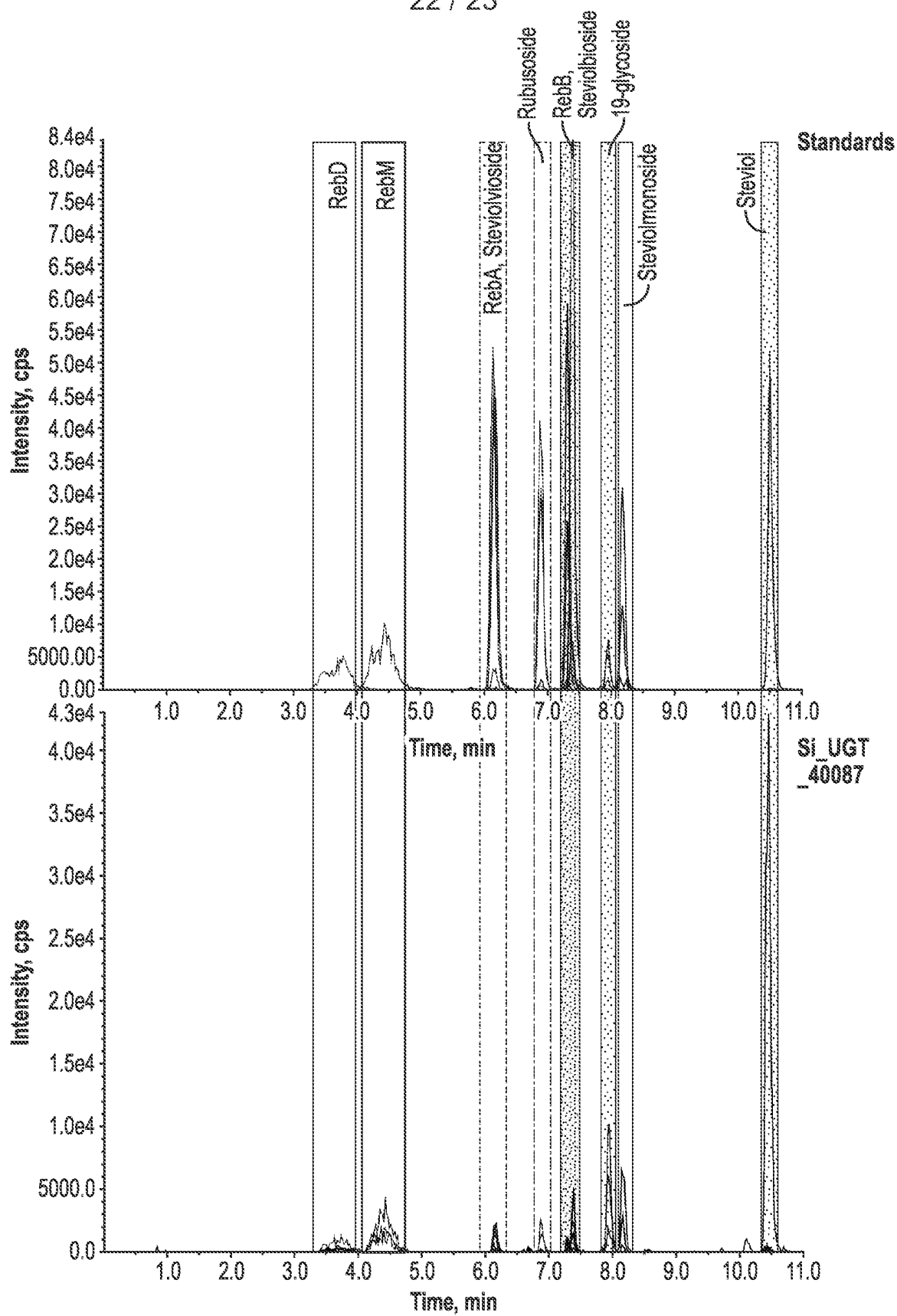


FIG. 9B

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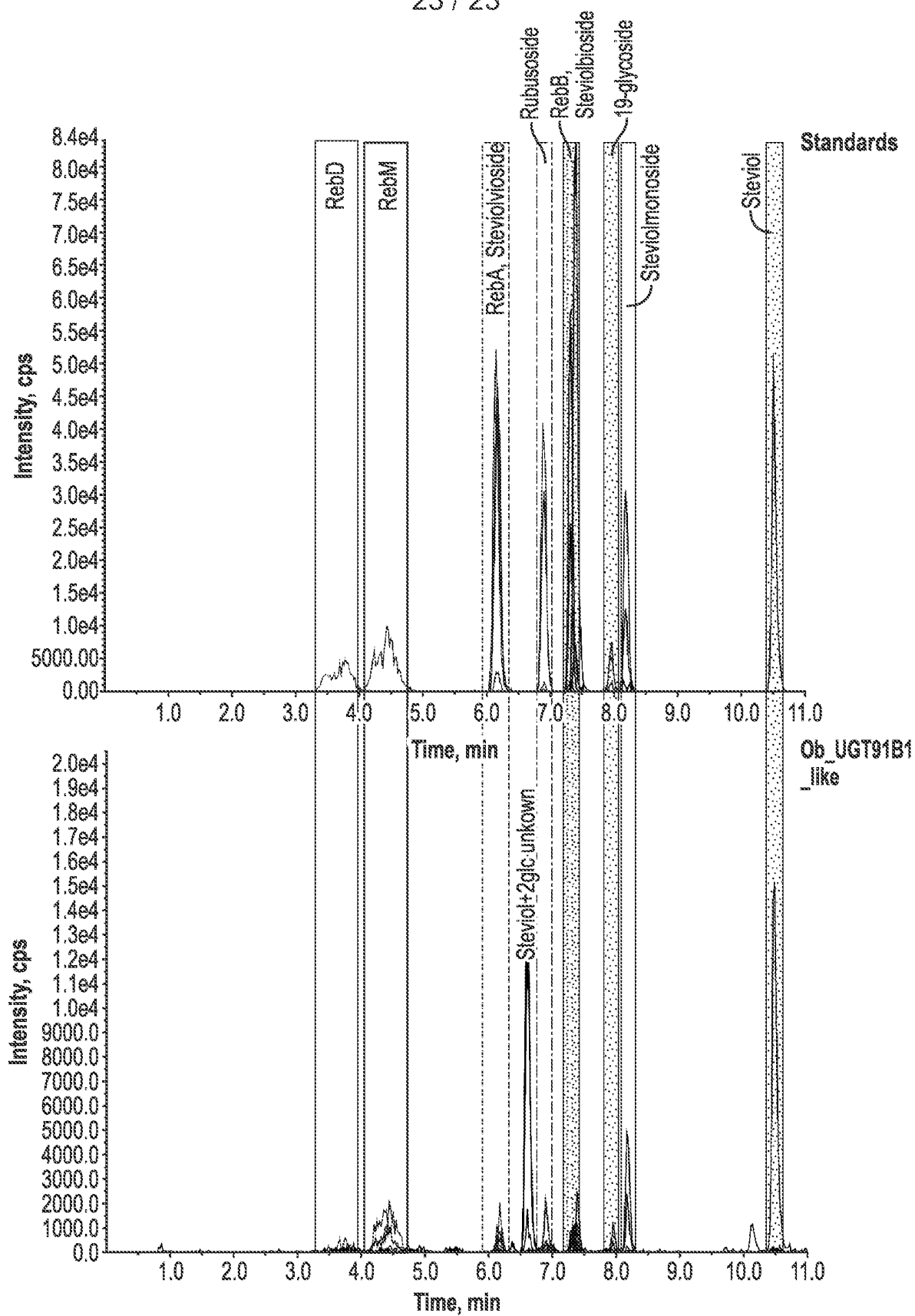


FIG. 9C