

1 Supplementary Material

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3 The HPLC-QTOF MS was applied to establish a method for semi-quantitative analysis of
4 components into plasma and brain of AD rats. Data processing methods, such as multiple
5 product ions filtering technique and neutral loss filtering technique, were adopted, and the
6 components were assigned by formula disassembly. The peak areas of components after oral
7 administration of KXS were listed in Table S1 and Table S2.

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9 **Table S1:** The peak area of components in rat plasma after oral administration of KXS in AD
10 rats at different blood sampling time points.

No.	Formula	Source	Area (30 min)	Area (1 h)	Area (2 h)
1	C ₁₀ H ₁₂ O ₅	KXS	1823	5195	1837
2	C ₁₂ H ₁₄ O ₅	KXS	421	177	ND
3	C ₁₂ H ₁₆ O ₄	KXS	174	230	135
4	C ₁₂ H ₁₆ O ₄	KXS	104	57	23
5	C ₁₂ H ₁₆ O ₅	KXS	744	397	265
6	C ₁₂ H ₁₆ O ₅	KXS	350	384	154
7	C ₁₆ H ₂₀ O ₉	KXS	560	316	243
8	C ₂₁ H ₂₄ O ₁₁	KXS	926	1812	526
9	C ₂₂ H ₃₀ O ₁₄	KXS	33	181	ND
10	C ₃₆ H ₄₆ O ₇	KXS	718	297	197
11	C ₃₆ H ₅₆ O ₁₃	KXS	135	ND	ND
12	C ₃₆ H ₆₀ O ₈	KXS	ND	50	ND
13	C ₃₆ H ₆₂ O ₁₀	KXS	1307	329	ND
14	C ₄₁ H ₇₀ O ₁₃	KXS	ND	527	ND
15	C ₄₁ H ₇₀ O ₁₄	KXS	212	98	76
16	C ₄₂ H ₇₂ O ₁₄	KXS	677	188	162
17	C ₄₇ H ₈₀ O ₁₇	KXS	ND	110	ND
18	C ₄₈ H ₈₂ O ₁₈	KXS	125	146	101
19	C ₄₈ H ₈₂ O ₁₈	KXS	110	102	98
20	C ₅₃ H ₉₀ O ₂₂	KXS	64	103	145
21	C ₅₄ H ₉₂ O ₂₃	KXS	ND	34	ND
22	C ₅₄ H ₉₂ O ₂₃	KXS	605	1651	1614

23	$C_{54}H_{92}O_{23}$	KXS	52	54	65
1	$C_{16}H_{20}O_9$	GR	547	185	ND
2	$C_{36}H_{62}O_{10}$	GR	323	159	159
3	$C_{41}H_{70}O_{14}$	GR	275	334	ND
4	$C_{47}H_{80}O_{17}$	GR	ND	98	ND
5	$C_{48}H_{82}O_{18}$	GR	73	43	77
6	$C_{48}H_{82}O_{18}$	GR	48	ND	ND
7	$C_{53}H_{90}O_{22}$	GR	64	33	143
8	$C_{54}H_{92}O_{23}$	GR	650	368	308
1	$C_{12}H_{16}O_4$	PR	113	149	149
1	$C_{12}H_{16}O_5$	PO	515	342	120
2	$C_{21}H_{24}O_{11}$	PO	1182	788	447
3	$C_{36}H_{46}O_7$	PO	907	400	244
4	$C_{42}H_{72}O_{14}$	PO	ND	195	ND
1	$C_{10}H_{12}O_5$	AT	2547	2905	2547
2	$C_{12}H_{14}O_5$	AT	409	124	409
3	$C_{12}H_{16}O_4$	AT	1022	78	1022
4	$C_{12}H_{16}O_5$	AT	425	304	425
5	$C_{22}H_{30}O_{14}$	AT	24	24	24
6	$C_{36}H_{56}O_{13}$	AT	247	85	247

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ND: not detected

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Table S2: The peak area of components in rat brain after oral administration of KXS in AD rats.

No.	Formula	t _R (min)	Source	Area (1 h)
1	C ₁₂ H ₁₆ O ₄	20.6	KXS	63
2	C ₁₂ H ₁₆ O ₄	28.18	KXS	220
3	C ₁₂ H ₁₆ O ₅	20.27	KXS	261
4	C ₁₂ H ₁₆ O ₅	40.76	KXS	207
5	C ₁₆ H ₂₀ O ₉	37.93	KXS	140
6	C ₂₁ H ₂₄ O ₁₁	9.75	KXS	134
7	C ₂₁ H ₂₄ O ₁₁	40.3	KXS	360
8	C ₃₆ H ₄₆ O ₇	28.07	KXS	613
9	C ₃₆ H ₄₆ O ₇	45.93	KXS	757
10	C ₄₂ H ₇₂ O ₁₃	40.26	KXS	25
1	C ₁₂ H ₁₆ O ₅	40.79	GR	162
2	C ₂₁ H ₂₄ O ₁₁	40.32	GR	397
3	C ₃₆ H ₄₆ O ₇	28.12	GR	801
4	C ₃₆ H ₄₆ O ₇	45.99	GR	620

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