

**S5 Table. Data from Titrations of Top Botanical Candidates for Inhibition of KHKC Activity.**

Rxn		Botanical Extract				Sample	Ave. No Fructose Controls	Ave. Fructose Only Controls	KHKC	*KHKC IC <sub>50</sub>	
ID	Well	Genus	Species	SampleID	Lot #	Conc (µg/mL)	( OD <sub>340nm</sub> )	( OD <sub>340nm</sub> )	( OD <sub>340nm</sub> )	Inhibition (%)	(µg/mL)
Rxn #65	A1	Angelica	archangelica	1	1	200	0.242	0.0665	0.532	62.3	90.38
Rxn #65	B1	Angelica	archangelica	1	1	100	0.301	0.0665	0.532	49.6	
Rxn #65	C1	Angelica	archangelica	1	1	75	0.342	0.0665	0.532	40.8	
Rxn #65	D1	Angelica	archangelica	1	1	50	0.393	0.0665	0.532	29.9	
Rxn #65	E1	Angelica	archangelica	1	1	25	0.456	0.0665	0.532	16.3	
Rxn #65	F1	Angelica	archangelica	1	1	10	0.519	0.0665	0.532	2.8	
Rxn #65	G1	Angelica	archangelica	1	1	1	0.588	0.0665	0.532	-12.0	
Rxn #65	H1	Angelica	archangelica	1	1	0.1	0.603	0.0665	0.532	-15.3	
Rxn #65	A2	Angelica	archangelica	1	1	200	0.231	0.0665	0.532	64.7	95.55
Rxn #65	B2	Angelica	archangelica	1	1	100	0.297	0.0665	0.532	50.5	
Rxn #65	C2	Angelica	archangelica	1	1	75	0.350	0.0665	0.532	39.1	
Rxn #65	D2	Angelica	archangelica	1	1	50	0.396	0.0665	0.532	29.2	
Rxn #65	E2	Angelica	archangelica	1	1	25	0.475	0.0665	0.532	12.2	
Rxn #65	F2	Angelica	archangelica	1	1	10	0.533	0.0665	0.532	-0.2	
Rxn #65	G2	Angelica	archangelica	1	1	1	0.577	0.0665	0.532	-9.7	
Rxn #65	H2	Angelica	archangelica	1	1	0.1	0.595	0.0665	0.532	-13.5	
Rxn #65	A3	Angelica	archangelica	1	1	200	0.242	0.0665	0.532	62.3	98.60
Rxn #65	B3	Angelica	archangelica	1	1	100	0.304	0.0665	0.532	49.0	
Rxn #65	C3	Angelica	archangelica	1	1	75	0.353	0.0665	0.532	38.5	
Rxn #65	D3	Angelica	archangelica	1	1	50	0.403	0.0665	0.532	27.7	
Rxn #65	E3	Angelica	archangelica	1	1	25	0.486	0.0665	0.532	9.9	
Rxn #65	F3	Angelica	archangelica	1	1	10	0.535	0.0665	0.532	-0.6	
Rxn #65	G3	Angelica	archangelica	1	1	1	0.593	0.0665	0.532	-13.1	
Rxn #65	H3	Angelica	archangelica	1	1	0.1	0.598	0.0665	0.532	-14.2	
Rxn #65	A10		No Fructose Control				0.062	0.0665	0.532	101.0	
Rxn #65	B10		No Fructose Control				0.072	0.0665	0.532	98.8	
Rxn #65	C10		No Fructose Control				0.070	0.0665	0.532	99.2	
Rxn #65	D10		No Fructose Control				0.067	0.0665	0.532	99.9	
Rxn #65	E10		No Fructose Control				0.068	0.0665	0.532	99.7	
Rxn #65	F10		No Fructose Control				0.067	0.0665	0.532	99.9	
Rxn #65	G10		No Fructose Control				0.072	0.0665	0.532	98.8	
Rxn #65	H10		No Fructose Control				0.054	0.0665	0.532	102.7	
Rxn #65	A11		Fructose Only Control				0.476	0.0665	0.532	12.0	
Rxn #65	B11		Fructose Only Control				0.486	0.0665	0.532	9.9	
Rxn #65	C11		Fructose Only Control				0.537	0.0665	0.532	-1.1	
Rxn #65	D11		Fructose Only Control				0.562	0.0665	0.532	-6.4	
Rxn #65	E11		Fructose Only Control				0.568	0.0665	0.532	-7.7	
Rxn #65	F11		Fructose Only Control				0.571	0.0665	0.532	-8.4	
Rxn #65	G11		Fructose Only Control				0.546	0.0665	0.532	-3.0	
Rxn #65	H11		Fructose Only Control				0.511	0.0665	0.532	4.5	
Rxn #66	A1	Scutellaria	baicalensis	4	1	200	0.254	0.0699	0.463	53.2	117.00
Rxn #66	B1	Scutellaria	baicalensis	4	1	100	0.292	0.0699	0.463	43.5	
Rxn #66	C1	Scutellaria	baicalensis	4	1	75	0.312	0.0699	0.463	38.4	
Rxn #66	D1	Scutellaria	baicalensis	4	1	50	0.337	0.0699	0.463	32.1	
Rxn #66	E1	Scutellaria	baicalensis	4	1	25	0.386	0.0699	0.463	19.6	
Rxn #66	F1	Scutellaria	baicalensis	4	1	10	0.430	0.0699	0.463	8.4	
Rxn #66	G1	Scutellaria	baicalensis	4	1	1	0.479	0.0699	0.463	-4.1	
Rxn #66	H1	Scutellaria	baicalensis	4	1	0.1	0.497	0.0699	0.463	-8.6	
Rxn #66	A2	Scutellaria	baicalensis	4	1	200	0.248	0.0699	0.463	54.7	120.60
Rxn #66	B2	Scutellaria	baicalensis	4	1	100	0.280	0.0699	0.463	46.6	
Rxn #66	C2	Scutellaria	baicalensis	4	1	75	0.315	0.0699	0.463	37.6	
Rxn #66	D2	Scutellaria	baicalensis	4	1	50	0.327	0.0699	0.463	34.6	
Rxn #66	E2	Scutellaria	baicalensis	4	1	25	0.375	0.0699	0.463	22.4	
Rxn #66	F2	Scutellaria	baicalensis	4	1	10	0.417	0.0699	0.463	11.7	
Rxn #66	G2	Scutellaria	baicalensis	4	1	1	0.453	0.0699	0.463	2.5	
Rxn #66	H2	Scutellaria	baicalensis	4	1	0.1	0.477	0.0699	0.463	-3.6	
Rxn #66	A3	Scutellaria	baicalensis	4	1	200	0.258	0.0699	0.463	52.1	126.20
Rxn #66	B3	Scutellaria	baicalensis	4	1	100	0.287	0.0699	0.463	44.8	
Rxn #66	C3	Scutellaria	baicalensis	4	1	75	0.305	0.0699	0.463	40.2	
Rxn #66	D3	Scutellaria	baicalensis	4	1	50	0.341	0.0699	0.463	31.0	
Rxn #66	E3	Scutellaria	baicalensis	4	1	25	0.374	0.0699	0.463	22.6	
Rxn #66	F3	Scutellaria	baicalensis	4	1	10	0.432	0.0699	0.463	7.9	
Rxn #66	G3	Scutellaria	baicalensis	4	1	1	0.454	0.0699	0.463	2.3	
Rxn #66	H3	Scutellaria	baicalensis	4	1	0.1	0.477	0.0699	0.463	-3.6	
Rxn #66	A4	Petroselinum	crispum	6	1	200	0.264	0.0699	0.463	50.6	185.50
Rxn #66	B4	Petroselinum	crispum	6	1	100	0.320	0.0699	0.463	36.4	
Rxn #66	C4	Petroselinum	crispum	6	1	75	0.350	0.0699	0.463	28.7	
Rxn #66	D4	Petroselinum	crispum	6	1	50	0.386	0.0699	0.463	19.6	
Rxn #66	E4	Petroselinum	crispum	6	1	25	0.403	0.0699	0.463	15.3	
Rxn #66	F4	Petroselinum	crispum	6	1	10	0.455	0.0699	0.463	2.0	
Rxn #66	G4	Petroselinum	crispum	6	1	1	0.460	0.0699	0.463	0.8	
Rxn #66	H4	Petroselinum	crispum	6	1	0.1	0.475	0.0699	0.463	-3.1	
Rxn #66	A5	Petroselinum	crispum	6	1	200	0.257	0.0699	0.463	52.4	190.10
Rxn #66	B5	Petroselinum	crispum	6	1	100	0.336	0.0699	0.463	32.3	
Rxn #66	C5	Petroselinum	crispum	6	1	75	0.342	0.0699	0.463	30.8	
Rxn #66	D5	Petroselinum	crispum	6	1	50	0.375	0.0699	0.463	22.4	
Rxn #66	E5	Petroselinum	crispum	6	1	25	0.408	0.0699	0.463	14.0	
Rxn #66	F5	Petroselinum	crispum	6	1	10	0.443	0.0699	0.463	5.1	
Rxn #66	G5	Petroselinum	crispum	6	1	1	0.451	0.0699	0.463	3.1	
Rxn #66	H5	Petroselinum	crispum	6	1	0.1	0.473	0.0699	0.463	-2.5	
Rxn #66	A6	Petroselinum	crispum	6	1	200	0.253	0.0699	0.463	53.4	180.70
Rxn #66	B6	Petroselinum	crispum	6	1	100	0.334	0.0699	0.463	32.8	
Rxn #66	C6	Petroselinum	crispum	6	1	75	0.343	0.0699	0.463	30.5	
Rxn #66	D6	Petroselinum	crispum	6	1	50	0.375	0.0699	0.463	22.4	

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Rxn		Botanical Extract				Sample	Ave. No Fructose Controls	Ave. Fructose Only Controls	KHKC	*KHKC IC <sub>50</sub>	
ID	Well	Genus	Species	SampleID	Lot #	Conc (µg/mL)	( OD <sub>340nm</sub> )	( OD <sub>340nm</sub> )	( OD <sub>340nm</sub> )	Inhibition (%)	(µg/mL)
Rxn #66	E6	<i>Petroselinum</i>	<i>crispum</i>	6	1	25	0.416	0.0699	0.463	12.0	
Rxn #66	F6	<i>Petroselinum</i>	<i>crispum</i>	6	1	10	0.442	0.0699	0.463	5.3	
Rxn #66	G6	<i>Petroselinum</i>	<i>crispum</i>	6	1	1	0.464	0.0699	0.463	-0.3	
Rxn #66	H6	<i>Petroselinum</i>	<i>crispum</i>	6	1	0.1	0.476	0.0699	0.463	-3.3	
Rxn #66	A10		No Fructose Control				0.076	0.0699	0.463	98.4	
Rxn #66	B10		No Fructose Control				0.067	0.0699	0.463	100.7	
Rxn #66	C10		No Fructose Control				0.069	0.0699	0.463	100.2	
Rxn #66	D10		No Fructose Control				0.070	0.0699	0.463	100.0	
Rxn #66	E10		No Fructose Control				0.059	0.0699	0.463	102.8	
Rxn #66	F10		No Fructose Control				0.070	0.0699	0.463	100.0	
Rxn #66	G10		No Fructose Control				0.072	0.0699	0.463	99.5	
Rxn #66	H10		No Fructose Control				0.076	0.0699	0.463	98.4	
Rxn #66	A11		Fructose Only Control				0.459	0.0699	0.463	1.0	
Rxn #66	B11		Fructose Only Control				0.468	0.0699	0.463	-1.3	
Rxn #66	C11		Fructose Only Control				0.458	0.0699	0.463	1.3	
Rxn #66	D11		Fructose Only Control				0.456	0.0699	0.463	1.8	
Rxn #66	E11		Fructose Only Control				0.458	0.0699	0.463	1.3	
Rxn #66	F11		Fructose Only Control				0.462	0.0699	0.463	0.3	
Rxn #66	G11		Fructose Only Control				0.465	0.0699	0.463	-0.5	
Rxn #66	H11		Fructose Only Control				0.474	0.0699	0.463	-2.8	
Rxn #67	A1	<i>Garcinia</i>	<i>mangostana</i>	8	1	200	0.168	0.0699	0.525	78.4	18.55
Rxn #67	B1	<i>Garcinia</i>	<i>mangostana</i>	8	1	100	0.170	0.0699	0.525	78.0	
Rxn #67	C1	<i>Garcinia</i>	<i>mangostana</i>	8	1	75	0.175	0.0699	0.525	76.9	
Rxn #67	D1	<i>Garcinia</i>	<i>mangostana</i>	8	1	50	0.200	0.0699	0.525	71.4	
Rxn #67	E1	<i>Garcinia</i>	<i>mangostana</i>	8	1	25	0.277	0.0699	0.525	54.5	
Rxn #67	F1	<i>Garcinia</i>	<i>mangostana</i>	8	1	10	0.414	0.0699	0.525	24.4	
Rxn #67	G1	<i>Garcinia</i>	<i>mangostana</i>	8	1	1	0.554	0.0699	0.525	-6.4	
Rxn #67	H1	<i>Garcinia</i>	<i>mangostana</i>	8	1	0.1	0.586	0.0699	0.525	-13.4	
Rxn #67	A2	<i>Garcinia</i>	<i>mangostana</i>	8	1	200	0.163	0.0699	0.525	79.5	18.27
Rxn #67	B2	<i>Garcinia</i>	<i>mangostana</i>	8	1	100	0.155	0.0699	0.525	81.3	
Rxn #67	C2	<i>Garcinia</i>	<i>mangostana</i>	8	1	75	0.182	0.0699	0.525	75.4	
Rxn #67	D2	<i>Garcinia</i>	<i>mangostana</i>	8	1	50	0.195	0.0699	0.525	72.5	
Rxn #67	E2	<i>Garcinia</i>	<i>mangostana</i>	8	1	25	0.270	0.0699	0.525	56.0	
Rxn #67	F2	<i>Garcinia</i>	<i>mangostana</i>	8	1	10	0.406	0.0699	0.525	26.1	
Rxn #67	G2	<i>Garcinia</i>	<i>mangostana</i>	8	1	1	0.550	0.0699	0.525	-5.5	
Rxn #67	H2	<i>Garcinia</i>	<i>mangostana</i>	8	1	0.1	0.569	0.0699	0.525	-9.7	
Rxn #67	A3	<i>Garcinia</i>	<i>mangostana</i>	8	1	200	0.146	0.0699	0.525	83.3	19.38
Rxn #67	B3	<i>Garcinia</i>	<i>mangostana</i>	8	1	100	0.162	0.0699	0.525	79.8	
Rxn #67	C3	<i>Garcinia</i>	<i>mangostana</i>	8	1	75	0.177	0.0699	0.525	76.5	
Rxn #67	D3	<i>Garcinia</i>	<i>mangostana</i>	8	1	50	0.203	0.0699	0.525	70.8	
Rxn #67	E3	<i>Garcinia</i>	<i>mangostana</i>	8	1	25	0.275	0.0699	0.525	54.9	
Rxn #67	F3	<i>Garcinia</i>	<i>mangostana</i>	8	1	10	0.413	0.0699	0.525	24.6	
Rxn #67	G3	<i>Garcinia</i>	<i>mangostana</i>	8	1	1	0.558	0.0699	0.525	-7.3	
Rxn #67	H3	<i>Garcinia</i>	<i>mangostana</i>	8	1	0.1	0.578	0.0699	0.525	-11.6	
Rxn #67	A10		No Fructose Control				0.075	0.0699	0.525	98.9	
Rxn #67	B10		No Fructose Control				0.070	0.0699	0.525	100.0	
Rxn #67	C10		No Fructose Control				0.069	0.0699	0.525	100.2	
Rxn #67	D10		No Fructose Control				0.066	0.0699	0.525	100.9	
Rxn #67	E10		No Fructose Control				0.071	0.0699	0.525	99.8	
Rxn #67	F10		No Fructose Control				0.068	0.0699	0.525	100.4	
Rxn #67	G10		No Fructose Control				0.068	0.0699	0.525	100.4	
Rxn #67	H10		No Fructose Control				0.072	0.0699	0.525	99.5	
Rxn #67	A11		Fructose Only Control				0.479	0.0699	0.525	10.1	
Rxn #67	B11		Fructose Only Control				0.495	0.0699	0.525	6.6	
Rxn #67	C11		Fructose Only Control				0.521	0.0699	0.525	0.9	
Rxn #67	D11		Fructose Only Control				0.531	0.0699	0.525	-1.3	
Rxn #67	E11		Fructose Only Control				0.537	0.0699	0.525	-2.6	
Rxn #67	F11		Fructose Only Control				0.537	0.0699	0.525	-2.6	
Rxn #67	G11		Fructose Only Control				0.533	0.0699	0.525	-1.8	
Rxn #67	H11		Fructose Only Control				0.567	0.0699	0.525	-9.2	
Rxn #63	A1	<i>Angelica</i>	<i>archangelica</i>	1	2	200	0.378	0.0602	0.494	26.7	510.90
Rxn #63	B1	<i>Angelica</i>	<i>archangelica</i>	1	2	100	0.442	0.0602	0.494	12.0	
Rxn #63	C1	<i>Angelica</i>	<i>archangelica</i>	1	2	75	0.452	0.0602	0.494	9.7	
Rxn #63	D1	<i>Angelica</i>	<i>archangelica</i>	1	2	50	0.469	0.0602	0.494	5.8	
Rxn #63	E1	<i>Angelica</i>	<i>archangelica</i>	1	2	25	0.448	0.0602	0.494	10.6	
Rxn #63	F1	<i>Angelica</i>	<i>archangelica</i>	1	2	10	0.503	0.0602	0.494	-2.1	
Rxn #63	G1	<i>Angelica</i>	<i>archangelica</i>	1	2	1	0.522	0.0602	0.494	-6.5	
Rxn #63	H1	<i>Angelica</i>	<i>archangelica</i>	1	2	0.1	0.539	0.0602	0.494	-10.4	
Rxn #63	A2	<i>Angelica</i>	<i>archangelica</i>	1	2	200	0.384	0.0602	0.494	25.4	521.10
Rxn #63	B2	<i>Angelica</i>	<i>archangelica</i>	1	2	100	0.429	0.0602	0.494	15.0	
Rxn #63	C2	<i>Angelica</i>	<i>archangelica</i>	1	2	75	0.441	0.0602	0.494	12.2	
Rxn #63	D2	<i>Angelica</i>	<i>archangelica</i>	1	2	50	0.467	0.0602	0.494	6.2	
Rxn #63	E2	<i>Angelica</i>	<i>archangelica</i>	1	2	25	0.477	0.0602	0.494	3.9	
Rxn #63	F2	<i>Angelica</i>	<i>archangelica</i>	1	2	10	0.487	0.0602	0.494	1.6	
Rxn #63	G2	<i>Angelica</i>	<i>archangelica</i>	1	2	1	0.509	0.0602	0.494	-3.5	
Rxn #63	H2	<i>Angelica</i>	<i>archangelica</i>	1	2	0.1	0.535	0.0602	0.494	-9.5	
Rxn #63	A3	<i>Angelica</i>	<i>archangelica</i>	1	2	200	0.377	0.0602	0.494	27.0	484.70
Rxn #63	B3	<i>Angelica</i>	<i>archangelica</i>	1	2	100	0.420	0.0602	0.494	17.1	
Rxn #63	C3	<i>Angelica</i>	<i>archangelica</i>	1	2	75	0.436	0.0602	0.494	13.4	
Rxn #63	D3	<i>Angelica</i>	<i>archangelica</i>	1	2	50	0.463	0.0602	0.494	7.1	
Rxn #63	E3	<i>Angelica</i>	<i>archangelica</i>	1	2	25	0.474	0.0602	0.494	4.6	
Rxn #63	F3	<i>Angelica</i>	<i>archangelica</i>	1	2	10	0.486	0.0602	0.494	1.8	
Rxn #63	G3	<i>Angelica</i>	<i>archangelica</i>	1	2	1	0.508	0.0602	0.494	-3.2	
Rxn #63	H3	<i>Angelica</i>	<i>archangelica</i>	1	2	0.1	0.527	0.0602	0.494	-7.6	

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Rxn		Botanical Extract					Sample	Ave. No Fructose Controls	Ave. Fructose Only Controls	KHKC	*KHKC IC <sub>50</sub>
ID	Well	Genus	Species	SampleID	Lot #	Conc (µg/mL)	( OD <sub>340nm</sub> )	( OD <sub>340nm</sub> )	( OD <sub>340nm</sub> )	Inhibition (%)	(µg/mL)
Rxn #63	A4	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	200	0.128	0.0602	0.494	84.4	22.83
Rxn #63	B4	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	100	0.180	0.0602	0.494	72.4	
Rxn #63	C4	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	75	0.203	0.0602	0.494	67.1	
Rxn #63	D4	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	50	0.233	0.0602	0.494	60.2	
Rxn #63	E4	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	25	0.256	0.0602	0.494	54.9	
Rxn #63	F4	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	10	0.352	0.0602	0.494	32.7	
Rxn #63	G4	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	1	0.483	0.0602	0.494	2.5	
Rxn #63	H4	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	0.1	0.511	0.0602	0.494	-3.9	
Rxn #63	A5	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	200	0.151	0.0602	0.494	79.1	22.21
Rxn #63	B5	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	100	0.179	0.0602	0.494	72.6	
Rxn #63	C5	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	75	0.206	0.0602	0.494	66.4	
Rxn #63	D5	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	50	0.219	0.0602	0.494	63.4	
Rxn #63	E5	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	25	0.273	0.0602	0.494	50.9	
Rxn #63	F5	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	10	0.347	0.0602	0.494	33.9	
Rxn #63	G5	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	1	0.481	0.0602	0.494	3.0	
Rxn #63	H5	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	0.1	0.513	0.0602	0.494	-4.4	
Rxn #63	A6	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	200	0.130	0.0602	0.494	83.9	25.04
Rxn #63	B6	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	100	0.179	0.0602	0.494	72.6	
Rxn #63	C6	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	75	0.202	0.0602	0.494	67.3	
Rxn #63	D6	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	50	0.233	0.0602	0.494	60.2	
Rxn #63	E6	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	25	0.263	0.0602	0.494	53.3	
Rxn #63	F6	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	10	0.372	0.0602	0.494	28.1	
Rxn #63	G6	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	1	0.496	0.0602	0.494	-0.5	
Rxn #63	H6	<i>Scutellaria</i>	<i>baicalensis</i>	2	2	0.1	0.510	0.0602	0.494	-3.7	
Rxn #63	A7	<i>Petroselinum</i>	<i>crispum</i>	3	2	200	0.307	0.0602	0.494	43.1	272.00
Rxn #63	B7	<i>Petroselinum</i>	<i>crispum</i>	3	2	100	0.381	0.0602	0.494	26.0	
Rxn #63	C7	<i>Petroselinum</i>	<i>crispum</i>	3	2	75	0.405	0.0602	0.494	20.5	
Rxn #63	D7	<i>Petroselinum</i>	<i>crispum</i>	3	2	50	0.437	0.0602	0.494	13.1	
Rxn #63	E7	<i>Petroselinum</i>	<i>crispum</i>	3	2	25	0.466	0.0602	0.494	6.5	
Rxn #63	F7	<i>Petroselinum</i>	<i>crispum</i>	3	2	10	0.484	0.0602	0.494	2.3	
Rxn #63	G7	<i>Petroselinum</i>	<i>crispum</i>	3	2	1	0.502	0.0602	0.494	-1.8	
Rxn #63	H7	<i>Petroselinum</i>	<i>crispum</i>	3	2	0.1	0.511	0.0602	0.494	-3.9	
Rxn #63	A8	<i>Petroselinum</i>	<i>crispum</i>	3	2	200	0.320	0.0602	0.494	40.1	305.30
Rxn #63	B8	<i>Petroselinum</i>	<i>crispum</i>	3	2	100	0.392	0.0602	0.494	23.5	
Rxn #63	C8	<i>Petroselinum</i>	<i>crispum</i>	3	2	75	0.425	0.0602	0.494	15.9	
Rxn #63	D8	<i>Petroselinum</i>	<i>crispum</i>	3	2	50	0.440	0.0602	0.494	12.4	
Rxn #63	E8	<i>Petroselinum</i>	<i>crispum</i>	3	2	25	0.473	0.0602	0.494	4.8	
Rxn #63	F8	<i>Petroselinum</i>	<i>crispum</i>	3	2	10	0.493	0.0602	0.494	0.2	
Rxn #63	G8	<i>Petroselinum</i>	<i>crispum</i>	3	2	1	0.511	0.0602	0.494	-3.9	
Rxn #63	H8	<i>Petroselinum</i>	<i>crispum</i>	3	2	0.1	0.511	0.0602	0.494	-3.9	
Rxn #63	A9	<i>Petroselinum</i>	<i>crispum</i>	3	2	200	0.304	0.0602	0.494	43.8	285.20
Rxn #63	B9	<i>Petroselinum</i>	<i>crispum</i>	3	2	100	0.390	0.0602	0.494	24.0	
Rxn #63	C9	<i>Petroselinum</i>	<i>crispum</i>	3	2	75	0.404	0.0602	0.494	20.7	
Rxn #63	D9	<i>Petroselinum</i>	<i>crispum</i>	3	2	50	0.433	0.0602	0.494	14.1	
Rxn #63	E9	<i>Petroselinum</i>	<i>crispum</i>	3	2	25	0.464	0.0602	0.494	6.9	
Rxn #63	F9	<i>Petroselinum</i>	<i>crispum</i>	3	2	10	0.485	0.0602	0.494	2.1	
Rxn #63	G9	<i>Petroselinum</i>	<i>crispum</i>	3	2	1	0.497	0.0602	0.494	-0.7	
Rxn #63	H9	<i>Petroselinum</i>	<i>crispum</i>	3	2	0.1	0.497	0.0602	0.494	-0.7	
Rxn #63	A10		No Fructose Control				0.061	0.0602	0.494	99.8	
Rxn #63	B10		No Fructose Control				0.067	0.0602	0.494	98.4	
Rxn #63	C10		No Fructose Control				0.062	0.0602	0.494	99.6	
Rxn #63	D10		No Fructose Control				0.054	0.0602	0.494	101.4	
Rxn #63	E10		No Fructose Control				0.055	0.0602	0.494	101.2	
Rxn #63	F10		No Fructose Control				0.061	0.0602	0.494	99.8	
Rxn #63	G10		No Fructose Control				0.061	0.0602	0.494	99.8	
Rxn #63	H10		No Fructose Control				0.061	0.0602	0.494	99.8	
Rxn #63	A11		Fructose Only Control				0.476	0.0602	0.494	4.1	
Rxn #63	B11		Fructose Only Control				0.495	0.0602	0.494	-0.2	
Rxn #63	C11		Fructose Only Control				0.504	0.0602	0.494	-2.3	
Rxn #63	D11		Fructose Only Control				0.491	0.0602	0.494	0.7	
Rxn #63	E11		Fructose Only Control				0.477	0.0602	0.494	3.9	
Rxn #63	F11		Fructose Only Control				0.509	0.0602	0.494	-3.5	
Rxn #63	G11		Fructose Only Control				0.504	0.0602	0.494	-2.3	
Rxn #63	H11		Fructose Only Control				0.497	0.0602	0.494	-0.7	
Rxn #64	A1	<i>Garcinia</i>	<i>mangostana</i>	4	2	200	0.185	0.0714	0.389	64.2	27.64
Rxn #64	B1	<i>Garcinia</i>	<i>mangostana</i>	4	2	100	0.161	0.0714	0.389	71.8	
Rxn #64	C1	<i>Garcinia</i>	<i>mangostana</i>	4	2	75	0.178	0.0714	0.389	66.4	
Rxn #64	D1	<i>Garcinia</i>	<i>mangostana</i>	4	2	50	0.227	0.0714	0.389	51.0	
Rxn #64	E1	<i>Garcinia</i>	<i>mangostana</i>	4	2	25	0.272	0.0714	0.389	36.8	
Rxn #64	F1	<i>Garcinia</i>	<i>mangostana</i>	4	2	10	0.404	0.0714	0.389	-4.7	
Rxn #64	G1	<i>Garcinia</i>	<i>mangostana</i>	4	2	1	0.502	0.0714	0.389	-35.6	
Rxn #64	H1	<i>Garcinia</i>	<i>mangostana</i>	4	2	0.1	0.540	0.0714	0.389	-47.5	
Rxn #64	A2	<i>Garcinia</i>	<i>mangostana</i>	4	2	200	0.173	0.0714	0.389	68.0	25.39
Rxn #64	B2	<i>Garcinia</i>	<i>mangostana</i>	4	2	100	0.170	0.0714	0.389	69.0	
Rxn #64	C2	<i>Garcinia</i>	<i>mangostana</i>	4	2	75	0.167	0.0714	0.389	69.9	
Rxn #64	D2	<i>Garcinia</i>	<i>mangostana</i>	4	2	50	0.198	0.0714	0.389	60.1	
Rxn #64	E2	<i>Garcinia</i>	<i>mangostana</i>	4	2	25	0.271	0.0714	0.389	37.2	
Rxn #64	F2	<i>Garcinia</i>	<i>mangostana</i>	4	2	10	0.391	0.0714	0.389	-0.6	
Rxn #64	G2	<i>Garcinia</i>	<i>mangostana</i>	4	2	1	0.500	0.0714	0.389	-34.9	
Rxn #64	H2	<i>Garcinia</i>	<i>mangostana</i>	4	2	0.1	0.526	0.0714	0.389	-43.1	
Rxn #64	A3	<i>Garcinia</i>	<i>mangostana</i>	4	2	200	0.177	0.0714	0.389	66.8	29.53
Rxn #64	B3	<i>Garcinia</i>	<i>mangostana</i>	4	2	100	0.170	0.0714	0.389	69.0	
Rxn #64	C3	<i>Garcinia</i>	<i>mangostana</i>	4	2	75	0.194	0.0714	0.389	61.4	
Rxn #64	D3	<i>Garcinia</i>	<i>mangostana</i>	4	2	50	0.225	0.0714	0.389	51.6	

**S5 Table. Data from Titrations of Top Botanical Candidates for Inhibition of KHKC Activity.**

Rxn		Botanical Extract				Sample	Ave. No Fructose Controls	Ave. Fructose Only Controls	KHKC	*KHKC IC <sub>50</sub>
ID	Well	Genus	Species	SampleID	Lot #	Conc (µg/mL)	( OD <sub>340nm</sub> )	( OD <sub>340nm</sub> )	Inhibition (%)	(µg/mL)
Rxn #64	E3	<i>Garcinia</i>	<i>mangostana</i>	4	2	25	0.281	0.0714	0.389	34.0
Rxn #64	F3	<i>Garcinia</i>	<i>mangostana</i>	4	2	10	0.405	0.0714	0.389	-5.0
Rxn #64	G3	<i>Garcinia</i>	<i>mangostana</i>	4	2	1	0.514	0.0714	0.389	-39.4
Rxn #64	H3	<i>Garcinia</i>	<i>mangostana</i>	4	2	0.1	0.537	0.0714	0.389	-46.6
Rxn #64	A10		No Fructose Control				0.274	0.0714	0.389	36.2
Rxn #64	B10		No Fructose Control				0.363	0.0714	0.389	8.2
Rxn #64	C10		No Fructose Control				0.415	0.0714	0.389	-8.2
Rxn #64	D10		No Fructose Control				0.440	0.0714	0.389	-16.1
Rxn #64	E10		No Fructose Control				0.423	0.0714	0.389	-10.7
Rxn #64	F10		No Fructose Control				0.417	0.0714	0.389	-8.8
Rxn #64	G10		No Fructose Control				0.415	0.0714	0.389	-8.2
Rxn #64	H10		No Fructose Control				0.368	0.0714	0.389	6.6
Rxn #64	A11		Fructose Only Control				0.082	0.0714	0.389	96.7
Rxn #64	B11		Fructose Only Control				0.076	0.0714	0.389	98.6
Rxn #64	C11		Fructose Only Control				0.071	0.0714	0.389	100.1
Rxn #64	D11		Fructose Only Control				0.070	0.0714	0.389	100.4
Rxn #64	E11		Fructose Only Control				0.070	0.0714	0.389	100.4
Rxn #64	F11		Fructose Only Control				0.065	0.0714	0.389	102.0
Rxn #64	G11		Fructose Only Control				0.064	0.0714	0.389	102.3
Rxn #64	H11		Fructose Only Control				0.073	0.0714	0.389	99.5

IC<sub>50</sub>: half maximal inhibitory concentration. OD: optical density.

\*KHKC IC<sub>50</sub>s were calculated using nonlinear regression (three parameters) in GraphPad Prism 5.03. To generate a best fit, an upper concentration (10,000 µg/mL at 100% inhibition) and a lower concentration (0.001 µg/mL at 0% inhibition) were added.