

Table S1. The species information of *Ferula* genus used in this study.

Latin name	Specimen voucher	Sample source	Sampling parts	GenBank accession
<i>Ferula sinkiangensis</i> K.M.Shen	7-x-z-7-1	Yining County, Xinjiang	leaves	KF792984
	7-x-z-7-2	Yining County, Xinjiang	leaves	KF792985
	7-x-z-7-3	Jeminay County, Xinjiang	leaves	KF792986
	7-x-z-7-4	Jeminay County, Xinjiang	leaves	KF792987
	7-x-z-7-5	Yining County, Xinjiang	leaves	KF792988
	7-x-z-8-2	Yining County, Xinjiang	leaves	KF792995
	7-x-z-7-6	Yining County, Xinjiang	roots	KF792989
	7-x-z-7-7	Yining County, Xinjiang	leaves	KF792990
	7-x-z-7-8	Jeminay County, Xinjiang	leaves	KF792991
	7-x-z-7-9	Jeminay County, Xinjiang	roots	KF792992
	7-x-z-7-10	Yining County, Xinjiang	leaves	KF792993
	7-x-z-8-1	Yining County, Xinjiang	leaves	KF792994
	13909	Shawan, County, Xinjiang	roots	KJ804121
<i>Ferula fukanensis</i> K.M.Shen	7-x-z-3-2	Fukang County, Xinjiang	leaves	KF793025
	7-x-z-3-5	Fukang County, Xinjiang	leaves	KF793027
	7-x-z-3-4	Fukang County, Xinjiang	leaves	KF793026
	7-x-z-3-1	Fukang County, Xinjiang	roots	KF793024
	13113	Fukang County, Xinjiang	roots	KJ804103
	13114	Fukang County, Xinjiang	roots	KJ804104
<i>Ferula ferulaeoides</i> (Steud.) Korov.	7-x-z-2-4	Toli County, Xinjiang	roots	KF793002
	7-x-z-2-5	Toli County, Xinjiang	leaves	KF793003
	7-x-z-2-6	Fuyun County, Xinjiang	leaves	KF793004
	7-x-z-2-7	Fuyun County, Xinjiang	leaves	KF793005
	7-x-z-2-8	Fuyun County, Xinjiang	leaves	KF793006
	7-x-z-2-9	Toli County, Xinjiang	leaves	KF793007
	7-x-z-2-10	Shihezi City, Xinjiang	leaves	KF793008
	7-x-z-2-11	Shihezi City, Xinjiang	leaves	KF793009
	7-x-z-2-13	Toli County, Xinjiang	leaves	KF793010
	7-x-z-2-15	Toli County, Xinjiang	leaves	KF793011
	7-x-z-2-15	Yumin County, Xinjiang	leaves	KF793012
	7-x-z-2-17	Yumin County, Xinjiang	leaves	KF793014
	7-x-z-2-16	Qitai County, Xinjiang	leaves	KF793013
	13912	Yumin County, Xinjiang	roots	KJ804106
<i>Ferula soongarica</i> Pall. ex Spreng.	7-x-z-9-10	Jeminay County, Xinjiang	root	KF792997
	7-x-z-9-9	Toli County, Xinjiang	root	KF792996
	7-x-z-9-11	Wenquan County, Xinjiang	leaves	KF792998
	7-x-z-9-13	Wenquan County, Xinjiang	leaves	KF792999
	7-x-z-9-15	Jeminay County, Xinjiang	leaves	KF793001
	7-x-z-9-14	Toli County, Xinjiang	leaves	KF793000

<i>Ferula caspica</i> M.B.	7-s-y-9-2	Toli County, Xinjiang	leaves	KF793015
	7-s-y-9-3	Habahe County, Xinjiang	leaves	KF793016
	7-s-y-9-4	Toli County, Xinjiang	leaves	KF793017
	7-s-y-9-12	Habahe County, Xinjiang	leaves	KF793036
	7-s-y-9-6	Toli County, Xinjiang	leaves	KF793018
	7-s-y-9-8	Burqin County, Xinjiang	roots	KF793020
	7-s-y-9-9	Burqin County, Xinjiang	leaves	KF793021
	7-s-y-9-10	Toli County, Xinjiang	leaves	KF793022
	7-s-y-9-11	Fuyun County, Xinjiang	leaves	KF793023
	7-s-y-9-7	Fuyun County, Xinjiang	leaves	KF793019
	13880	Aletai city, Xinjiang	roots	KJ804105
<i>Ferula lehmannii</i> Boiss.	7-s-z-2-1	Shawan County, Xinjiang	leaves	KF793028
	7-s-z-2-3	Shawan County, Xinjiang	leaves	KF793030
	7-s-z-2-4	Manas County, Xinjiang	roots	KF793031
	7-s-z-2-5	Shihezi City, Xinjiang	leaves	KF793032
	7-s-z-2-2	Shihezi City, Xinjiang	leaves	KF793029
<i>Ferula dubjanskyi</i> Korov. ex Pavl.	13889	Fukang city, Xinjiang	roots	KJ804107
	13891	Buerjin County, Xinjiang	leaves	KJ804108
	13911	Fukang city, Xinjiang	leaves	KJ804109
<i>Ferula akitschkensis</i> B. Fedtsen.	13855	Habahe County, Xinjiang	leaves	KJ804122
	13854	Yumin County, Xinjiang	leaves	KJ804123
	13853	Aletai city, Xinjiang	leaves	KJ804123
	13852	Tuoli County, Xinjiang	roots	KJ804125
<i>Ferula syreitschikowii</i> K.-Pol.	13883	Manasi city, Xinjiang	leaves	KJ804110
	13857	Manasi city, Xinjiang	leaves	KJ804111
	13861	Urumqi city, Xinjiang	leaves	KJ804112
	13862	Urumqi city, Xinjiang	leaves	KJ804113
	13865	Urumqi city, Xinjiang	leaves	KJ804114
	13871	Shawan County, Xinjiang	leaves	KJ804115
	13868	Shawan County, Xinjiang	leaves	KJ804116
	13876	Shihezi city, Xinjiang	roots	KJ804117
	13885	Shihezi city, Xinjiang	roots	KJ804117
	13879	Changji city, Xinjiang	roots	KJ804119
<i>Ferula litwinowiana</i> Koso-Pol.	7-s-y-9-1	Kazakhstan	roots	KF793035
		Genbank	unknow	DQ379423