

**Table S1 The GenBank accession numbers of 32 species using in phylogenetic analysis**

Number	Species	Genbank number
1	<i>Alpinia katsumadae</i>	NC_048461
2	<i>Alpinia oxyphylla</i>	KY985237
3	<i>Alpinia chinensis</i>	NC_050165
4	<i>Alpinia pumila</i>	NC_048462
5	<i>Amomum krervanh</i>	NC_036935
6	<i>Amomum compactum</i>	NC_036992
7	<i>Wurfbainia longiligularis</i>	MK889505
8	<i>Lanxangia tsaoko</i>	MK926774
9	<i>Wurfbainia villosa</i>	MK262730
10	<i>Cautleya gracilis</i>	NC_046845
11	<i>Curcuma longa</i>	MN711722
12	<i>Curcuma sichuanensis</i>	NC_050035
13	<i>Curcuma elata</i>	NC_050036
14	<i>Curcuma yunnanensis</i>	NC_050037
15	<i>Curcuma alismatifolia</i>	NC_050038
16	<i>Curcuma amarissima</i>	NC_050039
17	<i>Curcuma xanthorrhiza</i>	NC_050040
18	<i>Curcuma phaeocaulis</i>	MK109019
19	<i>Curcuma aromatica</i>	MK621773
20	<i>Hedychium coronarium</i>	NC_045863
21	<i>Hedychium spicatum</i>	NC_047248
22	<i>Kaempferia elegans</i>	NC_040852
23	<i>Kaempferia galanga</i>	NC_040851
24	<i>Roscoea alpina</i>	MT012418
25	<i>Roscoea tibetica</i>	NC_047420
26	<i>Roscoea humeana</i>	NC_046582
27	<i>Stahlianthus involucratus</i>	MK262725
28	<i>Zingiber montanum</i>	MK262727
29	<i>Zingiber zerumbet</i>	MK262726
30	<i>Zingiber officinale</i>	NC_044775
31	<i>Costus viridis</i>	MK262733
32	<i>Musella lasiocarpa</i>	NC_035637