

Supplementary Tables

Table S1. Genome sequencing datasets used in this study. Sexual progeny refer to single basidiospore-derived progeny, whereas asexual progeny refer to protoplast-derived monokaryotic strains.

Strain	SRA	Type	Data	Source	Analysis used
751	SRR32561769	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
754	SRR32561768	Heterokaryotic strain	NGS	CGMCC 5.78	Aneuploidy detection, SNP-density analysis
755	SRR32561765	Heterokaryotic strain	NGS	CGMCC 5.137	Aneuploidy detection, SNP-density analysis
765	SRR32561762	Heterokaryotic strain	NGS	CGMCC 5.55	Aneuploidy detection, SNP-density analysis
775	SRR32561759	Heterokaryotic strain	NGS	NBRC 30268	Aneuploidy detection, SNP-density analysis
776	SRR32561758	Heterokaryotic strain	NGS	CGMCC 5.545	Aneuploidy detection, SNP-density analysis
829	SRR32561736	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
879	SRR32561735	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
898	SRR32561734	Heterokaryotic strain	NGS	Wild strain	Aneuploidy detection, SNP-density analysis
902	SRR32561732	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
904	SRR32561731	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
906	SRR32561730	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
911	SRR32561729	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
912	SRR32561728	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
913	SRR32561727	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
934	SRR32561726	Heterokaryotic strain	NGS	Wild strain	Aneuploidy detection, SNP-density analysis
1497	SRR32561821	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
1634	SRR32561820	Heterokaryotic strain	NGS	Wild strain	Aneuploidy detection, SNP-density analysis
1635	SRR32561777	Heterokaryotic strain	NGS	Wild strain	Aneuploidy detection, SNP-density analysis
1652	SRR32561767	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
1653	SRR32561756	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
1668	SRR32561809	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
1675	SRR32561798	Heterokaryotic strain	NGS	Wild strain	Aneuploidy detection, SNP-density analysis
1679	SRR32561787	Heterokaryotic strain	NGS	Wild strain	Aneuploidy detection, SNP-density analysis
1691	SRR32561744	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
1692	SRR32561733	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
1693	SRR32561819	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
1694	SRR32561818	Heterokaryotic strain	NGS	Wild strain	Aneuploidy detection, SNP-density analysis
1695	SRR32561785	Heterokaryotic strain	NGS	Wild strain	Aneuploidy detection, SNP-density analysis
1696	SRR32561773	Heterokaryotic strain	NGS	Wild strain	Aneuploidy detection, SNP-density analysis
1699	SRR32561772	Heterokaryotic strain	NGS	Wild strain	Aneuploidy detection, SNP-density analysis
1704	SRR32561771	Heterokaryotic strain	NGS	Wild strain	Aneuploidy detection, SNP-density analysis
1705	SRR32561770	Heterokaryotic strain	NGS	Wild strain	Aneuploidy detection, SNP-density analysis
WZ-1	SRR32561724	Heterokaryotic strain	NGS	Cultivar strain	Aneuploidy detection, SNP-density analysis
7S01	SRR32561803	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S02	SRR32561802	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S03	SRR32561801	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S05	SRR32561800	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S06	SRR32561799	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S07	SRR32561797	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S08	SRR32561796	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S09	SRR32561795	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S10	SRR32561794	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S11	SRR32561793	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S13	SRR32561792	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S14	SRR32561791	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S15	SRR32561751	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S16	SRR32561750	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S18	SRR32561749	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S31	SRR32561748	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S32	SRR32561747	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S35	SRR32561746	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S36	SRR32561745	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S37	SRR32561743	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S38	SRR32561742	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S40	SRR32561741	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S41	SRR32561740	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S42	SRR32561739	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S43	SRR32561738	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7S45	SRR32561737	Sexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7P01	SRR32561814	Asexual progeny	NGS	Derived from strain 776	Aneuploidy detection

7P02	SRR32561813	Asexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7P04	SRR32561812	Asexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7P05	SRR32561811	Asexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7P06	SRR32561810	Asexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7P07	SRR32561808	Asexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7P08	SRR32561807	Asexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7P10	SRR32561806	Asexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7P11	SRR32561805	Asexual progeny	NGS	Derived from strain 776	Aneuploidy detection
7P12	SRR32561804	Asexual progeny	NGS	Derived from strain 776	Aneuploidy detection
1695SS01	SRR32561784	Sexual progeny	NGS	Derived from strain 1695	Aneuploidy detection
1695SS04	SRR32561783	Sexual progeny	NGS	Derived from strain 1695	Aneuploidy detection
1695SS05	SRR32561782	Sexual progeny	NGS	Derived from strain 1695	Aneuploidy detection
1695SS11	SRR32561781	Sexual progeny	NGS	Derived from strain 1695	Aneuploidy detection
1695SS15	SRR32561780	Sexual progeny	NGS	Derived from strain 1695	Aneuploidy detection
1695SS30	SRR32561779	Sexual progeny	NGS	Derived from strain 1695	Aneuploidy detection
1695SS36	SRR32561778	Sexual progeny	NGS	Derived from strain 1695	Aneuploidy detection
1695SS37	SRR32561776	Sexual progeny	NGS	Derived from strain 1695	Aneuploidy detection
1695SS38	SRR32561775	Sexual progeny	NGS	Derived from strain 1695	Aneuploidy detection
1695SS39	SRR32561774	Sexual progeny	NGS	Derived from strain 1695	Aneuploidy detection
1675SS02	SRR39318705	Sexual progeny	NGS	Derived from strain 1675	Aneuploidy detection
1675SS05	SRR39318704	Sexual progeny	NGS	Derived from strain 1675	Aneuploidy detection
1675SS06	SRR39318703	Sexual progeny	NGS	Derived from strain 1675	Aneuploidy detection
1675SS07	SRR39318702	Sexual progeny	NGS	Derived from strain 1675	Aneuploidy detection
1675SS09	SRR39318701	Sexual progeny	NGS	Derived from strain 1675	Aneuploidy detection
754SS40	SRR32561766	Sexual progeny	NGS	Derived from strain 754	Aneuploidy detection
755SS58	SRR32561764	Sexual progeny	NGS	Derived from strain 754	Aneuploidy detection
755SS95	SRR32561763	Sexual progeny	NGS	Derived from strain 755	Aneuploidy detection
765SS08	SRR32561760	Sexual progeny	NGS	Derived from strain 755	Aneuploidy detection
765SS15	SRR32561761	Sexual progeny	NGS	Derived from strain 765	Aneuploidy detection
1695_P01	SRR39318719	Asexual progeny	NGS	Derived from strain 765	Genome phasing
7S45L	SRR39318708	Subculturing strain	NGS	Derived from strain 7S45	AC-lost detection
7S32L	SRR39318706	Subculturing strain	NGS	Derived from strain 7S32	AC-lost detection
7S14-0th-1	SRR39318720	Subculturing strain	NGS	Derived from strain 7S14	Aneuploidy detection
7S14-5th-1	SRR32561786	Subculturing strain	NGS	Derived from strain 7S14	Aneuploidy detection
7S14-5th-2	SRR32561753	Subculturing strain	NGS	Derived from strain 7S14	Aneuploidy detection
7S14-5th-3	SRR32561752	Subculturing strain	NGS	Derived from strain 7S14	Aneuploidy detection
7S14-10th-1	SRR32561790	Subculturing strain	NGS	Derived from strain 7S14	Aneuploidy detection
7S14-10th-2	SRR32561789	Subculturing strain	NGS	Derived from strain 7S14	Aneuploidy detection
7S14-10th-3	SRR32561790	Subculturing strain	NGS	Derived from strain 7S14	Aneuploidy detection
776-5th-1	SRR32561817	Subculturing strain	NGS	Derived from strain 776	Aneuploidy detection
776-5th-2	SRR32561816	Subculturing strain	NGS	Derived from strain 776	Aneuploidy detection
776-5th-3	SRR32561815	Subculturing strain	NGS	Derived from strain 776	Aneuploidy detection
776-10th-1	SRR32561757	Subculturing strain	NGS	Derived from strain 776	Aneuploidy detection
776-10th-2	SRR32561755	Subculturing strain	NGS	Derived from strain 776	Aneuploidy detection
776-10th-3	SRR32561754	Subculturing strain	NGS	Derived from strain 776	Aneuploidy detection
1695	SRR39319406	Heterokaryotic strain	PacBio HiFi	Wild strain	Genome assembly
7S14	SRR39319403	Sexual progeny	Ultralong ONT	Derived from strain 776	Genome assembly
7S14	SRR39319404	Sexual progeny	Hi-C	Derived from strain 776	Genome assembly
1695SS11_7S32	SRR39318713	Heterokaryotic strain	RNA-Seq	Hybrid strain	RNA analysis
1695SS11_7S32	SRR39318712	Heterokaryotic strain	RNA-Seq	Hybrid strain	RNA analysis
1695SS11_7S32	SRR39318711	Heterokaryotic strain	RNA-Seq	Hybrid strain	RNA analysis
1695SS11_7S32L	SRR39318710	Heterokaryotic strain	RNA-Seq	Hybrid strain	RNA analysis
1695SS11_7S32L	SRR39318709	Heterokaryotic strain	RNA-Seq	Hybrid strain	RNA analysis
1695SS11_7S32L	SRR39318707	Heterokaryotic strain	RNA-Seq	Hybrid strain	RNA analysis
1695SS11_7S45	SRR39318700	Heterokaryotic strain	RNA-Seq	Hybrid strain	RNA analysis
1695SS11_7S45	SRR39318718	Heterokaryotic strain	RNA-Seq	Hybrid strain	RNA analysis
1695SS11_7S45	SRR39318717	Heterokaryotic strain	RNA-Seq	Hybrid strain	RNA analysis
1695SS11_7S45L	SRR39318716	Heterokaryotic strain	RNA-Seq	Hybrid strain	RNA analysis
1695SS11_7S45L	SRR39318715	Heterokaryotic strain	RNA-Seq	Hybrid strain	RNA analysis
1695SS11_7S45L	SRR39318714	Heterokaryotic strain	RNA-Seq	Hybrid strain	RNA analysis