

表 1 MaUSPs 基因家族成员的基本信息

Table 1 Basic information of the MaUSPs genes

基因 ID	蛋白 ID	染色体编号	起始位置	终止位置	大小(aa)	等电点	分子量(kD)	亚细胞定位
Gene ID	Protein ID	ChromosomeNumber	Gene start	Gene end	Size (aa)	pI	MW (kD)	Subcellular localization
MaUSP01	Ma01_p17560.1	chr01	12865234	12866097	192	6.21	21.02	Cytoplasmic
MaUSP02	Ma01_p18690.1	chr01	13993019	13997192	737	6.95	81.38	Nuclear
MaUSP03	Ma01_p20470.1	chr01	18756079	18766107	183	5.88	20.56	Nuclear
MaUSP04	Ma02_p10680.1	chr02	20167925	20168710	187	6.44	20.46	Extracellular
MaUSP05	Ma02_p17530.1	chr02	24389651	24394839	755	8.43	84.96	Nuclear
MaUSP06	Ma02_p23920.1	chr02	28726254	28727072	159	8.57	17.34	Extracellular
MaUSP07	Ma03_p13520.1	chr03	10653936	10656958	741	7.88	81.98	Nuclear
MaUSP08	Ma03_p15600.1	chr03	16525280	16526124	171	6.06	19.04	Cytoplasmic
MaUSP09	Ma03_p17280.1	chr03	22500965	22501781	217	10.14	23.8	Mitochondrial
MaUSP10	Ma03_p18710.1	chr03	24245233	24250039	166	5.77	18.29	Cytoplasmic
MaUSP11	Ma03_p19910.1	chr03	25174234	25174896	169	8.72	18.62	Nuclear
MaUSP12	Ma03_p26460.1	chr03	30176872	30178022	223	10.38	24.91	Mitochondrial
MaUSP13	Ma03_p26810.1	chr03	30404820	30405593	179	6.96	19.34	Mitochondrial
MaUSP14	Ma03_p30690.1	chr03	33211461	33214328	158	5.93	16.9	Cytoplasmic
MaUSP15	Ma04_p04660.1	chr04	3571046	3574467	752	8.23	83.31	Nuclear
MaUSP16	Ma04_p05780.1	chr04	4315798	4319003	688	8.96	76.01	Nuclear
MaUSP17	Ma04_p06800.1	chr04	4957383	4963299	161	5.95	17.36	Chloroplast
MaUSP18	Ma04_p10790.1	chr04	7651049	7652071	281	10.06	31.29	Nuclear
MaUSP19	Ma04_p11510.1	chr04	8121247	8125592	756	6.58	84.32	Nuclear
MaUSP20	Ma04_p15910.1	chr04	14537255	14538119	224	9.76	24.71	Nuclear
MaUSP21	Ma04_p22180.1	chr04	24542381	24545047	621	5.35	69.26	Cytoplasmic
MaUSP22	Ma04_p27320.1	chr04	28516538	28520468	734	8.58	81.99	Nuclear
MaUSP23	Ma04_p30030.1	chr04	30789361	30790265	228	10.95	25.05	Nuclear
MaUSP24	Ma05_p00170.1	chr05	122344	124687	170	6.35	18.09	Cytoplasmic
MaUSP25	Ma05_p21310.1	chr05	32950978	32957757	817	9.41	90.89	Nuclear
MaUSP26	Ma05_p22960.1	chr05	34731415	34732775	199	9.58	21.7	Chloroplast
MaUSP27	Ma05_p28710.1	chr05	39626842	39631219	235	4.91	25.48	Cytoplasmic
MaUSP28	Ma06_p03910.1	chr06	2832207	2835571	174	5.45	18.1	Chloroplast
MaUSP29	Ma06_p08940.1	chr06	6265563	6266507	200	9.79	22.16	Nuclear
MaUSP30	Ma06_p10620.1	chr06	7329824	7330988	185	6.25	20.93	Cytoplasmic
MaUSP31	Ma06_p20010.1	chr06	14080857	14084225	788	5.92	86.23	Nuclear
MaUSP32	Ma06_p20450.1	chr06	14544054	14546008	224	9.95	24.35	Nuclear
MaUSP33	Ma06_p21660.1	chr06	15991119	15993697	172	6.34	18.38	Cytoplasmic
MaUSP34	Ma06_p24260.1	chr06	22730901	22745993	160	8.58	17.45	Mitochondrial
MaUSP35	Ma06_p27650.1	chr06	29578350	29581407	706	9	77.03	Chloroplast
MaUSP36	Ma07_p03090.1	chr07	2407887	2408731	200	9.58	22.17	Nuclear
MaUSP37	Ma07_p24750.1	chr07	32008326	32011649	753	5.69	81.5	Chloroplast
MaUSP38	Ma08_p04250.1	chr08	2964186	2965421	227	10.22	25.02	Mitochondrial
MaUSP39	Ma08_p05530.1	chr08	3755772	3758814	779	7.61	85.69	Cytoplasmic
MaUSP40	Ma08_p06480.1	chr08	4376752	4378952	160	6.7	17.1	Cytoplasmic
MaUSP41	Ma08_p16600.1	chr08	19622604	19623973	196	9.98	21.8	PlasmaMembrane
MaUSP42	Ma08_p32810.1	chr08	43393027	43393992	224	9.12	24.27	Nuclear
MaUSP43	Ma09_p03760.1	chr09	2488807	2491334	165	8.43	18.4	Mitochondrial
MaUSP44	Ma09_p19680.1	chr09	25944173	25946801	605	6.98	66.75	Chloroplast

续表 1

Continuing table 1

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Gene ID	Protein ID	ChromosomeNumber	Gene start	Gene end	Size (aa)	pI	MW (kD)	Subcellular localization
MaUSP45	Ma09_p25070.1	chr09	36652532	36654893	264	5.02	28	Chloroplast
MaUSP46	Ma09_p30600.1	chr09	40661509	40664376	248	5.06	26.84	Chloroplast
MaUSP47	Ma10_p08820.1	chr10	23098457	23102881	268	5.08	28.28	Chloroplast
MaUSP48	Ma10_p29490.1	chr10	36056732	36057468	162	5.76	17.52	Cytoplasmic
MaUSP49	Ma11_p12790.1	chr11	16685814	16688743	162	5.8	17.73	Cytoplasmic
MaUSP50	Ma11_p15730.1	chr11	21410309	21411101	203	8.55	21.71	Extracellular
MaUSP51	Ma11_p19350.1	chr11	24243223	24250989	786	5.71	87.96	Nuclear
MaUSP52	Ma11_p24310.1	chr11	27316596	27319064	248	4.88	27.05	Cytoplasmic
MaUSP53	Ma00_t00840.1	-	-	-	736	8.49	82	Nuclear