

Table 1 Basic information of *BGAL* gene family in cotton

Species	Gene name	Gene ID	Protein length (aa)	Molecular weight (kDa)	Exon number	Signal peptide prediction
<i>Gossypium hirsutum</i>	GhBGAL1	GH_A01G1796	843	94.907	14	Y
	GhBGAL2	GH_A01G1797	843	94.859	14	Y
	GhBGAL3	GH_A02G1374	843	94.013	19	Y
	GhBGAL4	GH_A02G1949	463	52.057	12	Y
	GhBGAL5	GH_A03G2219	674	75.605	16	N
	GhBGAL6	GH_A05G0759	845	92.449	19	Y
	GhBGAL7	GH_A05G1366	871	97.011	19	Y
	GhBGAL8	GH_A05G1369	738	82.103	19	Y
	GhBGAL9	GH_A05G1896	733	82.097	18	Y
	GhBGAL10	GH_A05G2522	704	79.322	18	Y
	GhBGAL11	GH_A05G4025	716	81.228	18	Y
	GhBGAL12	GH_A06G0061	734	82.374	18	Y
	GhBGAL13	GH_A06G0504	818	91.745	19	Y
	GhBGAL14	GH_A06G0505	691	78.171	18	Y
	GhBGAL15	GH_A06G0780	842	93.682	18	Y
	GhBGAL16	GH_A06G0860	335	36.612	9	N
	GhBGAL17	GH_A07G0116	739	82.475	18	Y
	GhBGAL18	GH_A10G0601	846	93.691	19	Y
	GhBGAL19	GH_A10G1370	853	95.892	18	Y
	GhBGAL20	GH_A11G1880	854	95.261	19	Y
	GhBGAL21	GH_A11G3402	856	96.873	16	Y
	GhBGAL22	GH_A12G0009	813	90.951	20	Y
	GhBGAL23	GH_A12G0363	844	95.384	18	Y
	GhBGAL24	GH_A12G2231	746	83.217	17	N
	GhBGAL25	GH_A13G2127	341	39.151	9	N
	GhBGAL26	GH_A13G2188	749	84.666	16	N
	GhBGAL27	GH_D01G1914	843	94.94	14	Y
	GhBGAL28	GH_D01G1915	843	94.882	14	Y
	GhBGAL29	GH_D02G2389	732	81.984	17	Y
	GhBGAL30	GH_D03G0113	854	94.87	18	Y
	GhBGAL31	GH_D03G0592	843	94.199	19	Y
	GhBGAL32	GH_D04G0348	716	81.479	18	Y
	GhBGAL33	GH_D05G0756	845	92.462	19	Y
	GhBGAL34	GH_D05G1370	845	93.613	19	Y
	GhBGAL35	GH_D05G1376	738	82.226	19	Y
	GhBGAL36	GH_D05G1933	733	82.255	18	Y
	GhBGAL37	GH_D05G2544	704	79.216	18	Y
	GhBGAL38	GH_D06G0047	734	82.028	18	Y
	GhBGAL39	GH_D06G0474	697	78.68	18	Y
	GhBGAL40	GH_D06G0761	842	93.754	18	Y
	GhBGAL41	GH_D06G0841	406	45.018	10	Y
	GhBGAL42	GH_D07G0123	738	82.144	18	Y
	GhBGAL43	GH_D10G0226	838	94.084	19	Y
	GhBGAL44	GH_D10G0637	846	94.003	19	Y
	GhBGAL45	GH_D10G1521	890	99.71	19	Y
	GhBGAL46	GH_D12G0008	845	94.174	19	Y
	GhBGAL47	GH_D12G0342	844	95.38	18	Y
	GhBGAL48	GH_D12G2249	817	91.287	19	Y
	GhBGAL49	GH_D13G2108	774	87.331	18	N
	GhBGAL50	GH_D13G2171	856	96.839	16	Y
	GhBGAL51	GH_D13G2531	877	99.153	17	Y

Continued Table 1

Species	Gene name	Gene ID	Protein length (aa)	Molecular weight (kDa)	Exon number	Signal peptide prediction
<i>Gossypium barbadense</i>	GbBGAL1	GB_A01G1909	843	94.907	14	Y
	GbBGAL2	GB_A01G1910	843	94.859	14	Y
	GbBGAL3	GB_A02G1396	843	94.019	19	Y
	GbBGAL4	GB_A02G1974	854	94.902	18	Y
	GbBGAL5	GB_A03G2302	694	77.729	17	Y
	GbBGAL6	GB_A05G0763	845	92.461	19	Y
	GbBGAL7	GB_A05G1374	845	93.863	19	Y
	GbBGAL8	GB_A05G1923	733	82.097	18	Y
	GbBGAL9	GB_A05G2555	704	79.394	18	Y
	GbBGAL10	GB_A05G4115	716	81.3	18	Y
	GbBGAL11	GB_A06G0065	734	82.416	18	Y
	GbBGAL12	GB_A06G0512	818	91.745	19	Y
	GbBGAL13	GB_A06G0513	701	79.058	19	Y
	GbBGAL14	GB_A06G0815	842	93.541	18	Y
	GbBGAL15	GB_A06G0889	335	36.612	9	N
	GbBGAL16	GB_A07G0107	739	82.413	18	Y
	GbBGAL17	GB_A10G0209	838	93.891	19	Y
	GbBGAL18	GB_A10G0606	846	93.691	19	Y
	GbBGAL19	GB_A10G1442	853	95.908	18	Y
	GbBGAL20	GB_A11G1891	854	95.215	19	Y
	GbBGAL21	GB_A11G3483	624	70.724	13	N
	GbBGAL22	GB_A12G0007	845	94.135	19	Y
	GbBGAL23	GB_A12G0370	844	95.428	18	Y
	GbBGAL24	GB_A12G2322	776	86.535	18	N
	GbBGAL25	GB_A13G2262	801	90.599	18	N
	GbBGAL26	GB_A13G2325	1 352	152.026	27	N
	GbBGAL27	GB_D01G2004	843	94.907	14	Y
	GbBGAL28	GB_D01G2005	843	94.891	14	Y
	GbBGAL29	GB_D02G2446	732	81.964	17	Y
	GbBGAL30	GB_D03G0111	854	94.898	18	Y
	GbBGAL31	GB_D03G0592	843	94.227	19	Y
	GbBGAL32	GB_D04G0356	716	81.479	18	Y
	GbBGAL33	GB_D05G0751	845	92.462	19	Y
	GbBGAL34	GB_D05G1378	822	91.044	19	Y
	GbBGAL35	GB_D05G1385	738	82.226	19	Y
	GbBGAL36	GB_D05G1950	733	82.229	18	Y
	GbBGAL37	GB_D05G2555	701	79.179	18	Y
	GbBGAL38	GB_D06G0067	734	82.055	18	Y
	GbBGAL39	GB_D06G0504	818	91.794	19	Y
	GbBGAL40	GB_D06G0505	696	78.665	18	Y
	GbBGAL41	GB_D06G0803	842	93.764	18	Y
	GbBGAL42	GB_D06G0888	406	45.029	10	Y
	GbBGAL43	GB_D07G0116	737	82.028	18	Y
	GbBGAL44	GB_D10G0215	838	94.084	19	Y
	GbBGAL45	GB_D10G0632	846	93.86	19	Y
	GbBGAL46	GB_D10G1505	890	99.756	19	Y
	GbBGAL47	GB_D11G1938	854	95.113	19	Y
	GbBGAL48	GB_D12G0009	845	94.222	19	Y
	GbBGAL49	GB_D12G0347	844	95.38	18	Y
	GbBGAL50	GB_D12G2325	817	91.229	19	Y
	GbBGAL51	GB_D13G2210	891	100.484	19	Y
	GbBGAL52	GB_D13G2276	856	96.769	16	Y
	GbBGAL53	GB_D13G2624	877	99.169	17	Y
	GbBGAL54	GB_D13G2752	877	99.303	17	Y

Continued Table 1

Species	Gene name	Gene ID	Protein length (aa)	Molecular weight (kDa)	Exon number	Signal peptide prediction
<i>Gossypium arboreum</i>	GaBGAL1	Ga02G0116	854	94.789	18	Y
	GaBGAL2	Ga02G0696	843	94.069	19	Y
	GaBGAL3	Ga02G1107	843	94.905	14	Y
	GaBGAL4	Ga02G1108	843	94.905	14	Y
	GaBGAL5	Ga03G2554	717	80.305	17	Y
	GaBGAL6	Ga04G1771	716	81.386	18	Y
	GaBGAL7	Ga05G0795	845	92.515	19	Y
	GaBGAL8	Ga05G1432	859	95.624	19	Y
	GaBGAL9	Ga05G1436	738	82.132	19	Y
	GaBGAL10	Ga05G2010	733	82.07	18	Y
	GaBGAL11	Ga05G2676	665	75.104	19	Y
	GaBGAL12	Ga06G0075	734	82.416	18	Y
	GaBGAL13	Ga06G0454	1 442	162.587	36	Y
	GaBGAL14	Ga06G0745	819	91.171	19	Y
	GaBGAL15	Ga07G0121	738	82.293	18	Y
	GaBGAL16	Ga10G1511	890	99.971	19	Y
	GaBGAL17	Ga10G2452	846	93.691	19	Y
	GaBGAL18	Ga11G0419	838	95.085	16	Y
	GaBGAL19	Ga11G2096	842	93.936	19	Y
	GaBGAL20	Ga12G0769	781	87.485	20	Y
	GaBGAL21	Ga12G2694	853	96.562	20	N
	GaBGAL22	Ga13G2300	795	90.071	19	N
	GaBGAL23	Ga13G2368	1 512	170.819	33	N
	GaBGAL24	Ga14G0924	829	93.606	17	Y
<i>Gossypium raimondii</i>	GrBGAL1	Gorai.001G011600	738	82.291	18	Y
	GrBGAL2	Gorai.002G197100	754	85.441	14	Y
	GrBGAL3	Gorai.002G197200	843	94.905	14	Y
	GrBGAL4	Gorai.003G011900	854	94.746	18	Y
	GrBGAL5	Gorai.005G246600	732	81.963	17	Y
	GrBGAL6	Gorai.007G198900	859	95.819	19	Y
	GrBGAL7	Gorai.008G000600	845	94.389	20	Y
	GrBGAL8	Gorai.008G036000	844	95.309	18	Y
	GrBGAL9	Gorai.008G221000	797	89.279	19	Y
	GrBGAL10	Gorai.009G078400	845	92.564	19	Y
	GrBGAL11	Gorai.009G140800	845	93.659	19	Y
	GrBGAL12	Gorai.009G141300	738	82.197	19	Y
	GrBGAL13	Gorai.009G198100	733	82.194	18	Y
	GrBGAL14	Gorai.009G265200	699	78.656	18	Y
	GrBGAL15	Gorai.010G007300	734	82.196	18	Y
	GrBGAL16	Gorai.010G052200	818	91.819	19	Y
	GrBGAL17	Gorai.010G052300	591	66.492	16	Y
	GrBGAL18	Gorai.010G082900	843	93.962	18	Y
	GrBGAL19	Gorai.011G021800	838	94.072	19	Y
	GrBGAL20	Gorai.011G065300	846	93.858	19	Y
	GrBGAL21	Gorai.011G155500	890	99.933	19	Y
	GrBGAL22	Gorai.012G037700	716	81.437	18	Y
	GrBGAL23	Gorai.013G216400	829	93.61	17	Y
	GrBGAL24	Gorai.013G222800	794	89.91	16	Y