

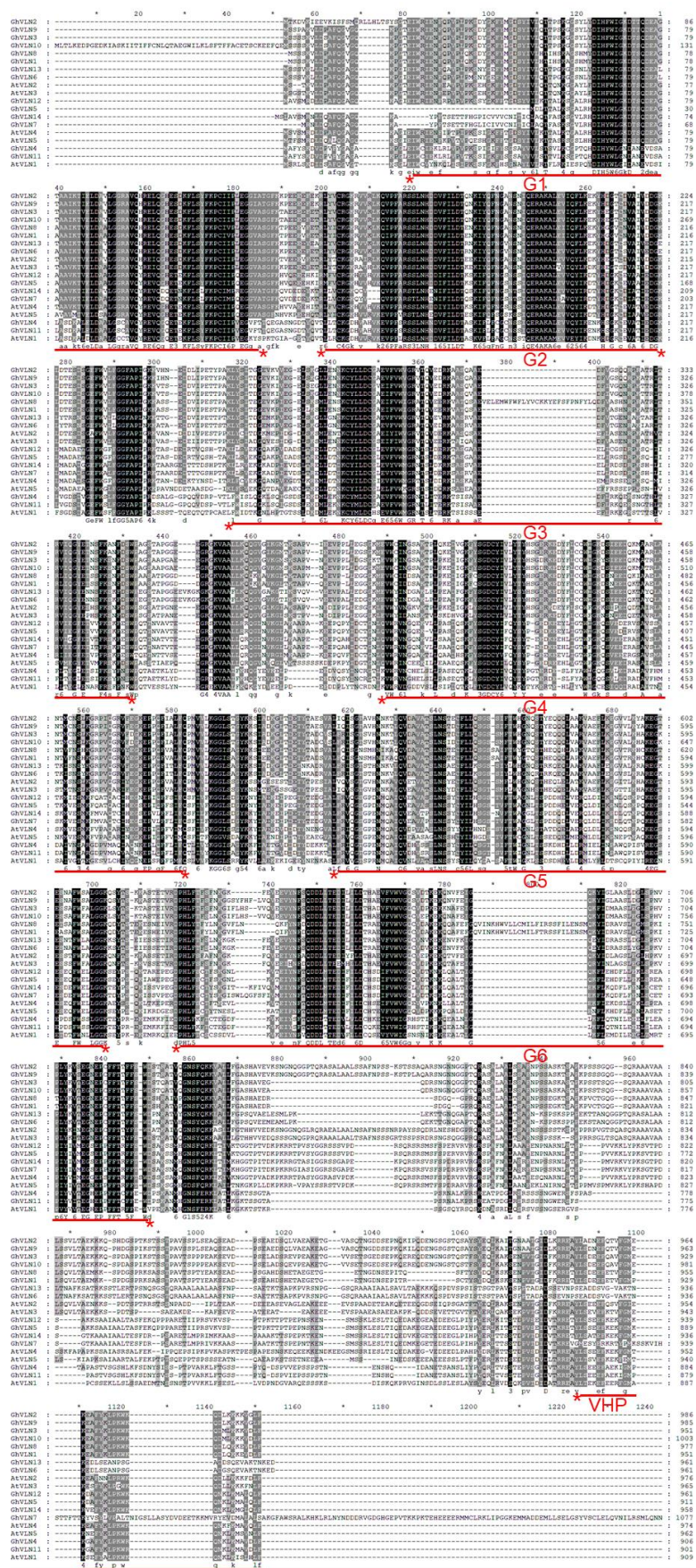
Supplementary Table S1. Ka/Ks ratios of *VLN* gene pairs in four cotton species.

Gene 1	ID 1	Gene 2	ID 2	Ka	Ks	Ka/Ks
<i>GaVLN1</i>	Gar01G14490	<i>GhVLN1</i>	Gh_A01G1083	0.0055	0.0117	0.4702
<i>GheVLN1</i>	Ghe01G16630	<i>GhVLN1</i>	Gh_A01G1083	0.0060	0.0133	0.4487
<i>GrVLN8</i>	Gorai.002G147100	<i>GhVLN8</i>	Gh_D01G1171	0.0083	0.0165	0.5030
<i>GhVLN1</i>	Gh_A01G1083	<i>GhVLN8</i>	Gh_D01G1171	0.0062	0.0437	0.1413
<i>GaVLN1</i>	Gar01G14490	<i>GrVLN8</i>	Gorai.002G147100	0.0049	0.0431	0.1145
<i>GheVLN1</i>	Ghe01G16630	<i>GrVLN8</i>	Gorai.002G147100	0.0054	0.0448	0.1207
<i>GaVLN2</i>	Gar02G04040	<i>GhVLN2</i>	Gh_A01G1679	0.0027	0.0150	0.1791
<i>GheVLN2</i>	Ghe01G25350	<i>GhVLN2</i>	Gh_A01G1679	0.0139	0.0269	0.5168
<i>GrVLN9</i>	Gorai.002G230700	<i>GhVLN9</i>	Gh_D01G1928	0.0045	0.0147	0.3086
<i>GhVLN2</i>	Gh_A01G1679	<i>GhVLN9</i>	Gh_D01G1928	0.0213	0.0422	0.5041
<i>GaVLN2</i>	Gar02G04040	<i>GrVLN9</i>	Gorai.002G230700	0.0125	0.0388	0.3222
<i>GheVLN2</i>	Ghe01G25350	<i>GrVLN9</i>	Gorai.002G230700	0.0053	0.0347	0.1539
<i>GaVLN3</i>	Gar02G12450	<i>GhVLN3</i>	Gh_A02G1060	0.0032	0.0140	0.2305
<i>GheVLN3</i>	Ghe02G13900	<i>GhVLN3</i>	Gh_A02G1060	0.0055	0.0124	0.4455
<i>GrVLN10</i>	Gorai.003G091200	<i>GhVLN10</i>	Gh_D03G0623	0.0037	0.0156	0.2358
<i>GhVLN3</i>	Gh_A02G1060	<i>GhVLN10</i>	Gh_D03G0623	0.0078	0.0473	0.1646
<i>GaVLN3</i>	Gar02G12450	<i>GrVLN10</i>	Gorai.003G091200	0.0064	0.0559	0.1152
<i>GheVLN3</i>	Ghe02G13900	<i>GrVLN10</i>	Gorai.003G091200	0.0051	0.0543	0.0932
<i>GaVLN4</i>	Gar05G09140	<i>GhVLN4</i>	Gh_A05G0743	0.0029	0.0098	0.2940
<i>GheVLN4</i>	Ghe05G09630	<i>GhVLN4</i>	Gh_A05G0743	0.0029	0.0065	0.4422
<i>GrVLN11</i>	Gorai.009G092400	<i>GhVLN11</i>	Gh_D05G0875	0.0058	0.0164	0.3528
<i>GhVLN4</i>	Gh_A05G0743	<i>GhVLN11</i>	Gh_D05G0875	0.0082	0.0281	0.2921
<i>GaVLN4</i>	Gar05G09140	<i>GrVLN11</i>	Gorai.009G092400	0.0092	0.0282	0.3261
<i>GheVLN4</i>	Ghe05G09630	<i>GrVLN11</i>	Gorai.009G092400	0.0092	0.0248	0.3706
<i>GaVLN5</i>	GarUnG03550	<i>GhVLN5</i>	Gh_A08G2495	0.0033	0.0129	0.2578
<i>GheVLN5</i>	Ghe08G02560	<i>GhVLN5</i>	Gh_A08G2495	0.0038	0.0081	0.4725
<i>GrVLN12</i>	Gorai.004G026700	<i>GhVLN12</i>	Gh_D08G0231	0.0032	0.0184	0.1725
<i>GhVLN5</i>	Gh_A08G2495	<i>GhVLN12</i>	Gh_D08G0231	0.0071	0.0430	0.1659
<i>GaVLN5</i>	GarUnG03550	<i>GrVLN12</i>	Gorai.004G026700	0.0172	0.0628	0.2738
<i>GheVLN5</i>	Ghe08G02560	<i>GrVLN12</i>	Gorai.004G026700	0.0177	0.0577	0.3058
<i>GaVLN6</i>	Gar11G42050	<i>GhVLN6</i>	Gh_A11G2801	0.0023	0.0103	0.2212
<i>GheVLN6</i>	Ghe11G42870	<i>GhVLN6</i>	Gh_A11G2801	0.0160	0.0191	0.8343

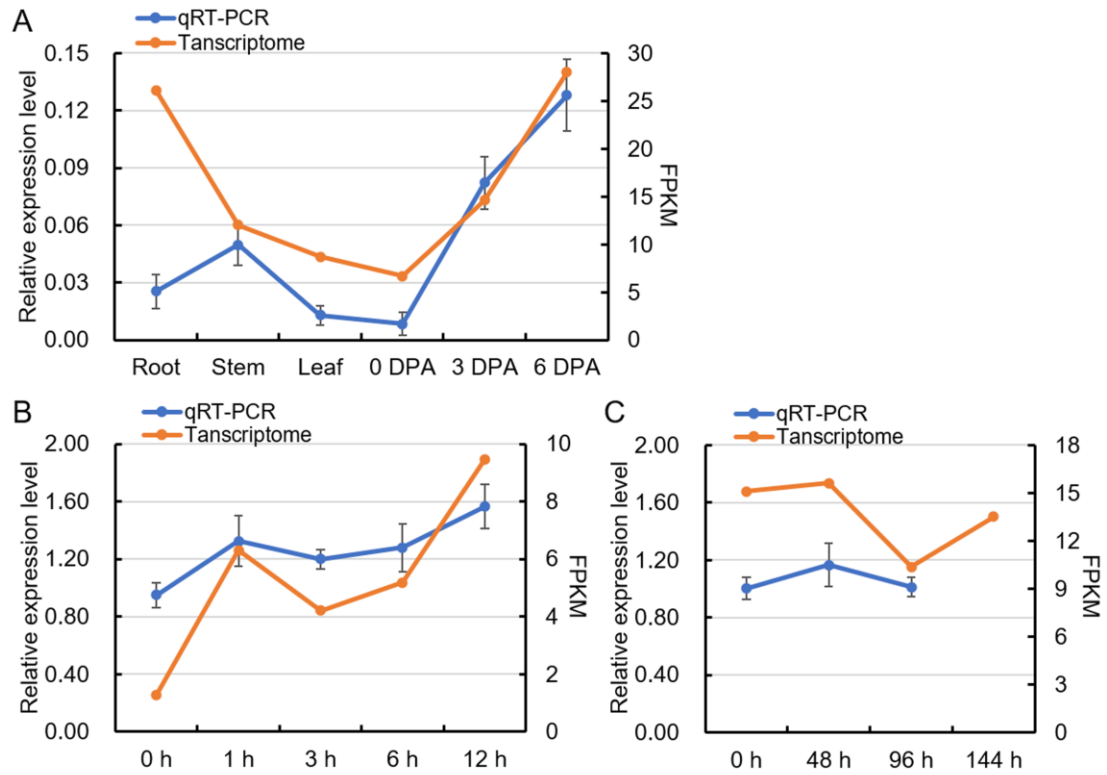
Gene 1	ID 1	Gene 2	ID 2	Ka	Ks	Ka/Ks
<i>GrVLN13</i>	Gorai.007G360500	<i>GhVLN13</i>	Gh_D11G3147	0.0064	0.0177	0.3625
<i>GhVLN6</i>	Gh_A11G2801	<i>GhVLN13</i>	Gh_D11G3147	0.0120	0.0405	0.2953
<i>GaVLN6</i>	Gar11G42050	<i>GrVLN13</i>	Gorai.007G360500	0.0143	0.0421	0.3390
<i>GheVLN6</i>	Ghe11G42870	<i>GrVLN13</i>	Gorai.007G360500	0.0281	0.0539	0.5212
<i>GaVLN7</i>	Gar13G28140	<i>GhVLN7</i>	Gh_A13G2351	0.0341	0.0571	0.5966
<i>GheVLN7</i>	Ghe13G30060	<i>GhVLN7</i>	Gh_A13G2351	0.0346	0.0570	0.6059
<i>GrVLN14</i>	Gorai.013G246800	<i>GhVLN14</i>	Gh_D13G2218	0.0074	0.0230	0.3202
<i>GhVLN7</i>	Gh_A13G2351	<i>GhVLN14</i>	Gh_D13G2218	0.0327	0.0908	0.3598
<i>GaVLN7</i>	Gar13G28140	<i>GrVLN14</i>	Gorai.013G246800.1	0.0250	0.0828	0.3021
<i>GheVLN7</i>	Ghe13G30060	<i>GrVLN14</i>	Gorai.013G246800.1	0.0255	0.0827	0.3083



Supplementary Figure S1. Motif Logos of 20 conserved motifs in GhVLN proteins.



Supplementary Figure S2. Analysis of conserved domains, G1-G6 and VHP, in VLN proteins.



Supplementary Figure S3. Expression analysis of *GhVLN12* gene in different cotton tissues and under abiotic and biotic stresses. A) Different cotton tissues, root, stem, leaf, 0 and 3 DPA ovules, 6 DPA fibers. B) Salt stress. C) *V. dahliae* V991 biotic stress.