Table S3. Protein physicochemical properties and supplementary information of Gm

Gene Name	Orientation	Intron Number	Total number of atoms	Formula	GRAVY
GmLACS1	reverse	19	10650	$C_{3419}H_{5341}N_{881}O_{982}S_{27}$	-0.164
GmLACS2	forward	19	10493	$C_{3360}H_{5264}N_{868}O_{967}S_{34}$	-0.215
GmLACS3	reverse	19	10480	$C_{3355}H_{5248}N_{880}O_{963}S_{34}$	-0.194
GmLACS4	reverse	19	10496	$C_{3362}H_{5247}N_{871}O_{982}S_{34}$	-0.204
GmLACS5	forward	11	10746	$C_{3393}H_{5402}N_{926}O_{997}S_{28}$	-0.066
GmLACS6	forward	19	10358	$C_{3312}H_{5168}N_{868}O_{976}S_{34}$	-0.197
GmLACS7	forward	19	10515	$C_{3373}H_{5274}N_{868}O_{967}S_{33}$	-0.220
GmLACS8	forward	19	10453	$C_{3352}H_{5242}N_{864}O_{966}S_{29}$	-0.153
GmLACS9	forward	19	10328	$C_{3319}H_{5140}N_{864}O_{970}S_{35}$	-0.223
GmLACS10	forward	19	10323	$C_{3313}H_{5133}N_{861}O_{981}S_{35}$	-0.229
GmLACS11	forward	11	11244	$C_{3591}H_{5641}N_{941}O_{1045}S_{26}$	-0.107
GmLACS12	reverse	11	10773	$C_{3415}H_{5416}N_{912}O_{1005}S_{25}$	-0.021
GmLACS13	forward	13	10023	$C_{3198}H_{5023}N_{845}O_{935}S_{22}$	0.016
GmLACS14	reverse	19	10501	$C_{3361}H_{5255}N_{883}O_{966}S_{36}$	-0.231
GmLACS15	forward	19	10359	$C_{3312}H_{5169}N_{871}O_{974}S_{33}$	-0.208
GmLACS16	reverse	11	11271	$C_{3601}H_{5659}N_{935}O_{1049}S_{27}$	-0.077
GmLACS17	reverse	11	10492	$C_{3347}H_{5260}N_{876}O_{984}S_{25}$	-0.092

ıLACSs

Total number of negatively charged residues (Asp+Glu)	Total number of negatively charged residues (Asp+Glu)	Alpha helix (%)	Beta turn (%)	Extended strand (%)	Random coil (%)	Signal peptide
81	80	36.81	8.35	18.63	36.21	0.0007
86	83	37.88	7.58	18.48	36.06	0.0010
82	80	39.12	8.46	18.43	33.99	0.0013
81	75	38.35	7.67	18.20	35.79	0.0008
78	82	38.76	6.77	17.87	36.60	0.5552
81	76	39.24	8.64	18.33	33.79	0.0008
86	84	38.64	7.73	18.79	34.85	0.0017
78	80	38.61	8.30	17.35	35.75	0.0010
74	69	37.96	8.54	19.51	33.99	0.0011
81	69	38.73	7.62	17.99	35.67	0.0013
82	84	39.72	6.34	17.52	36.41	0.0006
86	78	40.66	7.04	18.82	33.48	0.3203
78	69	40.19	6.80	18.86	34.16	0.5097
85	81	38.97	7.85	18.88	34.29	0.0013
80	76	39.24	8.48	18.48	33.79	0.0009
84	83	40.69	6.62	17.93	34.76	0.0006
80	77	37.69	7.86	19.14	35.31	0.0016

Transmem-brance structure
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