

Genetic diversity and proteomic analysis of vegetable soybean (*Glycine max* (L.) Merrill) accessions grown in mineral and BRIS soils

NOR HAFIZAH ZAKARIA¹, MOHD SHUKOR NORDIN², MAIZATUL AKMA IBRAHIM^{2,3},
FADZILAH ADIBAH ABDUL MAJID¹, ZARINA ZAINUDDIN^{2,3}

¹Institute of Marine Biotechnology, Universiti Malaysia Terengganu, Kuala Nerus, Terengganu, Malaysia

²Department of Plant Science, Kulliyah of Science, International Islamic University Malaysia (IIUM),
Kuantan, Pahang, Malaysia

³Plant Productivity and Sustainable Resource Unit, Department of Plant Science, Kulliyah of Science,
International Islamic University Malaysia (IIUM), Kuantan, Pahang, Malaysia

Electronic Supplementary Material (ESM)

The authors are fully responsible for both the content and the formal aspects of the electronic supplementary material. No editorial adjustments were made.

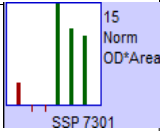
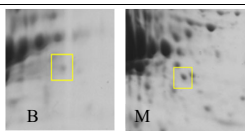
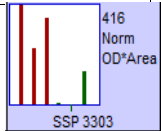
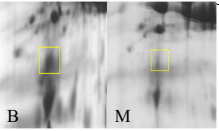
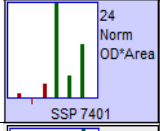
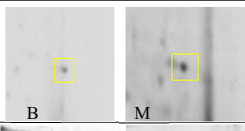
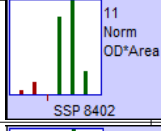
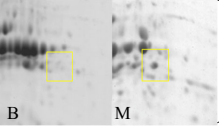
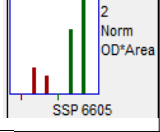
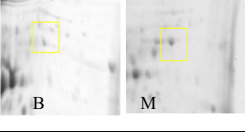
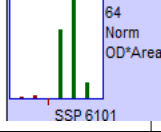
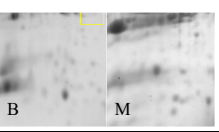
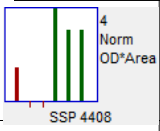
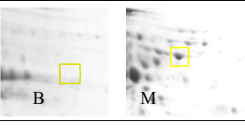
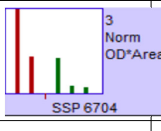
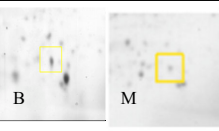
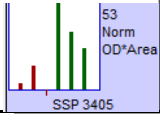
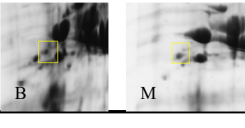
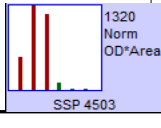
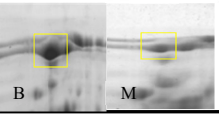
Table S1. Polymorphism data for the 14 vegetable soybean accessions

Primer	Size of fragment (bp)	Nucleotide sequences	No. of polymorphic band	No. of monomorphic band	Total band	Polymorphism (%)	Ta (°C)
UBC 807	300–2 500	AGA GAG AGA GAG AGA GT	8	5	13	61.54	43.0
UBC 811	150–1 700	GAG AGA GAG AGA GAG AC	4	8	12	33.33	43.0
UBC 815	150–2 000	CTC TCT CTC TCT CTC TG	5	3	8	62.50	43.0
UBC 817	350–1 500	CAC ACA CAC ACA CAC AA	6	5	11	54.55	46.0
UBC 822	150–2 000	TCT CTC TCT CTC TCT CA	5	7	12	41.67	43.0
UBC 825	350–1 500	ACA CAC ACA CAC ACA CT	3	5	8	37.50	47.0
UBC 826	300–1 500	ACA CAC ACA CAC ACA CC	4	8	12	33.33	49.0
UBC 827	250–1 600	ACA CAC ACA CAC ACA CG	3	6	9	33.33	49.0
UBC 828	250–1 500	TGT GTG TGT GTG TGT GA	5	4	9	55.56	49.0
UBC 829	300–1 700	TGT GTG TGT GTG TGT GC	1	9	10	10.00	49.0
UBC 834	250–1 400	AGA GAG AGA GAG AGA GYT	1	10	11	9.09	45.0
UBC 835	300–1 100	AGA GAG AGA GAG AGA GYC	2	6	8	25.00	46.0
UBC 836	250–1 600	AGA GAG AGA GAG AGA GYA	4	8	12	33.33	44.0
UBC 841	200–1 500	GAG AGA GAG AGA GAG AYC	2	6	8	25.00	44.0
UBC 842	200–1 400	GAG AGA GAG AGA GAG AYG	7	5	12	58.33	45.0
UBC 843	350–1 500	CTC TCT CTC TCT CTC TRA	3	4	7	42.86	43.0
UBC 844	200–2 000	CTC TCT CTC TCT CTC TRC	4	7	11	36.36	45.0
UBC 847	400–1 550	CAC ACA CAC ACA CAC ARC	7	2	9	77.78	49.0
UBC 849	500–1 600	GTG TGT GTG TGT GTG TYA	5	1	6	83.33	47.0
UBC 850	450–1 600	GTG TGT GTG TGT GTG TYC	3	4	7	42.86	49.0
UBC 857	300–1 700	ACA CAC ACA CAC ACA CYG	3	6	9	33.33	50.0
UBC 861	350–1 400	ACC ACC ACC ACC ACC ACC	4	5	9	44.44	56.0
UBC 868	400–1 450	GAA GAA GAA GAA GAA GAA	1	7	8	12.50	40.0
UBC 873	350–1 800	GAC AGA CAGACA GAC A	8	5	13	61.54	43.0
UBC 880	250–1 400	GGA GAG GAG AGG AGA	6	2	8	12.50	44.0
UBC 899	400–1 200	CAT GGT GTT GGT CAT TGT TCC A	5	1	6	83.33	51.0
Total	–		109	139	248	–	–
Average	–		4.19	5.35	9.54	42.50	–

Ta – annealing temperature

<https://doi.org/10.17221/38/2022-CJGPB>

Table S2. Histogram view of the quantitative expression of the protein spots corresponding to spot 1-10 for IIUMSOY1, IIUMSOY11 and IIUMSOY1

Spot No./Accession	Histogram	Gel view	Spot no./Accession	Histogram	Gel view
1/IIUMSOY1			6/IIUMSOY11		
2/IIUMSOY1			7/IIUMSOY14		
3/IIUMSOY1			8/IIUMSOY14		
4/IIUMSOY1			9/IIUMSOY14		
5/IIUMSOY11			10/IIUMSOY1		

A higher bar indicates a higher expression level; three bars represent three replicates; no bar means no expression level detected

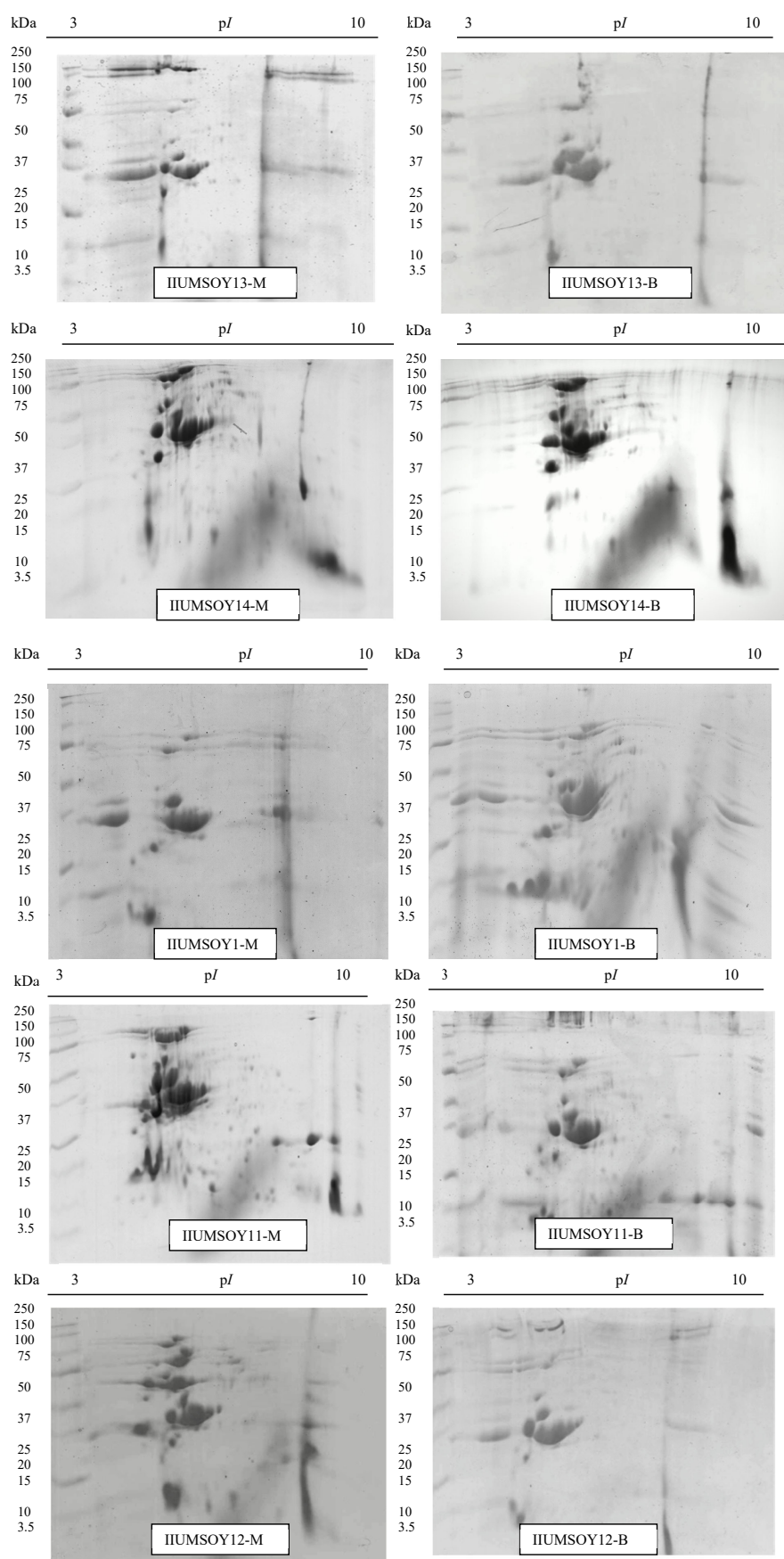
<https://doi.org/10.17221/38/2022-CJGPB>


Figure S1. Differential protein expression in IIUMSOY11, IIUMSOY12, IIUMSOY13 and IIUMSOY14 using 2D-PAGE for pH 3–10 M – mineral; B – BRIS; kDa – kilodalton (protein marker); pI – isoelectric point