

Table S7. Physicochemical property analysis of 151 *BocAP2/ERFs* in kohlrabi.

Gene ID	Sequence ID	Accession number of NCBI Reference Sequence	Length of cDNA	Number of amino acids (aa)	Molecular Weight (Da)	Theoretical pI	Total number of atoms	Aliphatic index	Grand average of hydropathicity
<i>BocERF1</i>	Cluster-17807.98657	XM_013757078.1	1305	434	47518.81	8.50	6545	57.88	-0.685
<i>BocERF2</i>	Cluster-8561.0	XM_013759052.1	1323	440	48877.67	8.67	6760	62.98	-0.593
<i>BocERF3</i>	Cluster-17807.113651	XM_013763491.1	570	189	21216.39	5.89	2905	46.56	-0.921
<i>BocERF4</i>	Cluster-17807.67803	XM_013774334.1	1062	353	39674.11	4.99	5476	58.67	-0.778
<i>BocERF5</i>	Cluster-17807.21654	XM_013775771.1	1221	406	45177.47	8.55	6283	62.78	-0.787
	Cluster-17807.108274								
	Cluster-17807.108275								
	Cluster-17807.15765								
<i>BocERF6</i>	Cluster-17807.119527	XM_013880612.3	819	272	30696.37	4.99	4252	69.26	-0.521
<i>BocERF7</i>	Cluster-17807.97937	NM_001315928.1	669	222	24734.94	9.12	3483	70.32	-0.652
<i>BocERF8</i>	Cluster-17807.109356	NM_001316282.1	621	206	23288.72	4.94	3214	63.01	-0.787
	Cluster-17807.47931								
<i>BocERF9</i>	Cluster-17807.108193	XM_006297821.2	1158	385	43267.81	5.06	5938	50.73	-0.846
<i>BocERF10</i>	Cluster-17807.23530	XM_009109191.2	468	155	17556.09	10.00	2476	72.52	-0.646
<i>BocERF11</i>	Cluster-13788.0	XM_009135261.3	1269	422	46694.43	8.80	6498	64.34	-0.694
	Cluster-17807.11695								
<i>BocERF12</i>	Cluster-17807.111848	XM_009148142.3	1140	379	41844.10	4.89	5725	49.50	-0.793
<i>BocERF13</i>	Cluster-17807.14842	XM_013728592.1	735	244	27341.80	5.32	3828	72.38	-0.631
<i>BocERF14</i>	Cluster-17807.75233	XM_013728852.1	567	188	20415.04	5.44	2836	69.10	-0.408
<i>BocERF15</i>	Cluster-17807.123753	XM_013731560.1	1146	381	42105.37	4.98	5764	50.29	-0.806
<i>BocERF16</i>	Cluster-17807.67619	XM_013731560.1	1131	376	41436.72	4.88	5669	48.62	-0.757
<i>BocERF17</i>	Cluster-17807.67620	XM_013731560.1	1140	379	41777.10	4.98	5720	49.53	-0.782
<i>BocERF18</i>	Cluster-19609.0	XM_013734904.1	768	255	28706.88	5.07	3972	58.59	-0.850
<i>BocERF19</i>	Cluster-26482.0	XM_013734904.1	774	257	28861.05	5.20	3993	60.04	-0.817
<i>BocERF20</i>	Cluster-12843.0	XM_013736990.1	552	183	20061.29	5.71	2739	57.16	-0.502
<i>BocERF21</i>	Cluster-17807.103870	XM_013737154.1	1005	334	36666.01	5.68	5095	68.20	-0.494
	Cluster-17807.28353								
<i>BocERF22</i>	Cluster-17807.111305	XM_013738045.1	816	271	30222.04	5.06	4222	76.68	-0.441
	Cluster-17807.119164								
<i>BocERF23</i>	Cluster-17807.111093	XM_013738368.1	771	256	28556.77	5.75	3994	66.64	-0.709
<i>BocERF24</i>	Cluster-17807.45964	XM_013739850.1	561	186	21008.19	5.56	2903	58.28	-0.996
	Cluster-17807.98579								
<i>BocERF25</i>	Cluster-20522.0	XM_013741144.1	786	261	29773.79	5.10	4065	52.76	-0.903

BocERF26	Cluster-20681.0	XM_013741329.1	480	159	17592.91	7.04	2444	68.74	-0.715
BocERF27	Cluster-17807.7585	XM_013741497.1	456	151	16380.10	6.27	2234	65.89	-0.415
BocERF28	Cluster-17807.74068	XM_013743782.1	576	191	21007.17	7.10	2883	59.42	-0.820
BocERF29	Cluster-17807.70200	XM_013745251.1	489	162	18023.65	9.60	2530	71.79	-0.511
BocERF30	Cluster-15258.0	XM_013746533.1	1035	344	38331.13	9.47	5348	67.79	-0.585
BocERF31	Cluster-17807.152397	XM_013746533.1	1035	344	38398.19	9.53	5349	65.52	-0.609
BocERF32	Cluster-17807.132655	XM_013747492.1	597	198	21936.87	5.51	3047	68.08	-0.475
	Cluster-17807.97987								
BocERF33	Cluster-17807.126676	XM_013747936.1	687	228	25924.54	4.89	3556	56.93	-0.711
BocERF34	Cluster-17807.45997	XM_013748703.1	732	243	27130.37	5.41	3783	67.45	-0.696
BocERF35	Cluster-17807.63901	XM_013748703.1	732	243	27129.38	5.54	3784	67.45	-0.696
BocERF36	Cluster-17807.19103	XM_013749655.1	540	179	19828.86	4.63	2701	51.28	-0.570
BocERF37	Cluster-17807.78121	XM_013751691.1	663	220	24387.46	9.30	3420	70.09	-0.665
BocERF38	Cluster-17807.145380	XM_013753923.1	864	287	31479.61	8.56	4431	79.97	-0.403
	Cluster-17807.147440								
BocERF39	Cluster-17807.112787	XM_013755124.1	1092	363	40562.85	4.92	5573	53.28	-0.805
BocERF40	Cluster-17807.72481	XM_013755124.1	1092	363	40530.79	4.92	5572	54.08	-0.799
BocERF41	Cluster-17807.136204	XM_013755131.1	1065	354	39472.76	5.03	5435	53.79	-0.767
BocERF42	Cluster-17807.56242	XM_013755131.1	1053	350	39335.55	5.32	5404	51.06	-0.783
BocERF43	Cluster-17807.58663	XM_013755131.1	1062	353	39399.77	5.09	5429	54.79	-0.759
BocERF44	Cluster-17807.56240	XM_013755131.1	1062	353	39353.68	5.09	5425	55.61	-0.753
BocERF45	Cluster-17807.56241	XM_013755131.1	1062	353	39367.71	5.09	5428	55.61	-0.753
BocERF46	Cluster-17807.134025	XM_013755131.1	1062	353	39309.65	5.08	5416	54.79	-0.758
	Cluster-17807.59127								
BocERF47	Cluster-17807.84610	XM_013755972.1	540	179	20250.39	5.83	2799	56.15	-0.980
BocERF48	Cluster-17807.90768	XM_013756535.1	768	255	28554.81	7.73	3958	62.04	-0.780
BocERF49	Cluster-17807.116927	XM_013757077.1	1365	454	49647.24	8.21	6847	60.90	-0.649
BocERF50	Cluster-17807.116928	XM_013757077.1	1365	454	49674.35	8.21	6858	62.38	-0.627
BocERF51	Cluster-17807.43103	XM_013757077.1	1365	454	49656.25	8.21	6847	60.90	-0.648
	Cluster-17807.116925								
BocERF52	Cluster-17807.116926	XM_013757077.1	1365	454	49561.19	8.21	6842	62.18	-0.627
BocERF53	Cluster-17807.104480	XM_013757078.1	1305	434	47518.81	8.50	6545	57.88	-0.685
BocERF54	Cluster-17807.116929	XM_013757078.1	1305	434	47489.86	8.71	6548	59.22	-0.656
	Cluster-17807.155014								
BocERF55	Cluster-17807.140788	XM_013759052.1	1323	440	48763.52	8.47	6745	63.43	-0.590
BocERF56	Cluster-17807.19661	XM_013759052.1	1323	440	48793.55	8.47	6749	63.20	-0.596

BocERF57	Cluster-17807.3481	XM_013759052.1	1323	440	48745.49	8.47	6747	64.32	-0.584
BocERF58	Cluster-17807.68685	XM_013759052.1	1323	440	48877.67	8.67	6760	62.98	-0.593
BocERF59	Cluster-17807.142693	XM_013759059.1	1287	428	47144.87	8.86	6543	64.74	-0.562
BocERF60	Cluster-17807.55305	XM_013759059.1	1287	428	47172.85	8.70	6536	64.30	-0.559
BocERF61	Cluster-17807.68686	XM_013759059.1	1287	428	47135.83	8.71	6534	63.83	-0.565
BocERF62	Cluster-17807.33829	XM_013760691.1	465	154	17127.09	6.42	2369	66.62	-0.515
BocERF63	Cluster-17807.67932	XM_013760154.1	933	310	34420.74	8.70	4797	66.48	-0.541
BocERF64	Cluster-17807.149896	XM_013766827.1	1284	427	46899.36	8.83	6518	61.10	-0.757
	Cluster-17807.149892								
	Cluster-17807.149893								
BocERF65	Cluster-17807.149895	XM_013766827.1	1278	425	46979.65	8.79	6537	62.73	-0.725
BocERF66	Cluster-17807.150914	XM_013766827.1	1284	427	46872.34	8.83	6515	61.10	-0.750
BocERF67	Cluster-17807.164	XM_013766873.1	762	253	28235.72	5.23	3927	65.61	-0.667
BocERF68	Cluster-17807.40114	XM_013766873.1	762	253	28204.74	5.00	3928	69.84	-0.581
BocERF69	Cluster-17807.119526	XM_013770131.1	810	269	30408.05	5.17	4220	68.96	-0.575
BocERF70	Cluster-17807.148103	XM_013770131.1	819	272	30722.50	5.17	4264	67.13	-0.521
BocERF71	Cluster-17807.145709	XM_013770553.1	831	276	30091.12	5.52	4151	61.92	-0.572
BocERF72	Cluster-17807.130167	XM_013774334.1	1047	348	39117.47	4.94	5391	58.39	-0.778
BocERF73	Cluster-17807.90406	XM_013774335.1	1038	345	38859.24	4.94	5359	58.90	-0.771
BocERF74	Cluster-17807.102609	XM_013774807.1	954	317	35290.94	5.09	4837	50.88	-0.734
	Cluster-17807.63424								
BocERF75	Cluster-17807.107222	XM_013774807.1	954	317	35306.94	5.09	4838	50.57	-0.742
BocERF76	Cluster-17807.108276	XM_013775770.1	1236	411	45798.17	8.69	6368	62.02	-0.790
BocERF77	Cluster-17807.19575	XM_013775770.1	1254	417	46186.64	8.69	6427	63.45	-0.762
BocERF78	Cluster-17807.108277	XM_013775771.1	1221	406	45170.43	8.55	6278	61.82	-0.783
	Cluster-17807.108279								
BocERF79	Cluster-11428.0	XM_013782826.1	831	276	31207.79	4.95	4320	69.31	-0.611
BocERF80	Cluster-17807.105515	XM_013783142.1	693	230	25485.05	4.94	3513	61.91	-0.680
BocERF81	Cluster-17807.132959	XM_013782268.1	783	260	29495.06	5.59	4100	61.92	-0.690
BocERF82	Cluster-17807.159090	XM_013783150.1	660	219	24321.89	4.90	3358	64.57	-0.618
BocERF83	Cluster-621.0	XM_013779125.1	651	216	24431.63	8.67	3395	59.63	-0.870
BocERF84	Cluster-17807.77102	XM_013794541.3	987	328	36210.40	6.07	5005	59.30	-0.566
	Cluster-17807.80319								
BocERF85	Cluster-17807.82175	XM_013794541.3	966	321	35449.55	6.00	4899	59.38	-0.555
BocERF86	Cluster-12737.0	XM_013814510.3	882	293	33222.08	6.46	4573	51.98	-0.808
BocERF87	Cluster-17807.4752	XM_013800927.3	834	277	31680.29	6.61	4357	51.44	-0.886

BocERF88	Cluster-22256.0	XM_013799429.3	693	230	25680.45	4.62	3545	65.74	-0.548
BocERF89	Cluster-23151.0	XM_013814459.3	741	246	27714.1	5.9	3877	75.77	-0.633
BocERF90	Cluster-7744.0	XM_013799772.3	573	190	20673.15	4.97	2833	57.68	-0.501
BocERF91	Cluster-17807.7192	XM_013826556.3	789	262	29910.41	7.23	4141	66.34	-0.826
BocERF92	Cluster-17807.115520	XM_013837776.3	771	256	28588.72	5.43	3989	66.64	-0.685
BocERF93	Cluster-17807.48648	XM_013842689.3	783	260	29416.93	5.59	4093	63.42	-0.694
BocERF94	Cluster-17807.6879	XM_013850443.3	966	321	35696.26	5.37	4886	53.58	-0.693
BocERF95	Cluster-17807.7524	XM_013849742.3	687	228	25187.98	4.69	3474	65.88	-0.431
BocERF96	Cluster-17807.43104	XM_013859430.3	1299	432	47500.02	8.71	6563	62.18	-0.614
BocERF97	Cluster-17807.97897	XM_013859430.3	1299	432	47512.13	8.87	6570	63.08	-0.6
BocERF98	Cluster-17807.32362	XM_013880612.3	831	276	31201.74	4.95	4314	67.9	-0.603
	Cluster-17807.148102								
BocERF99	Cluster-17807.26909	XM_013880959.3	1143	380	41846.12	4.94	5727	49.13	-0.798
BocERF100	Cluster-17807.73973	XM_013880959.3	1143	380	41913.3	4.98	5745	50.92	-0.773
	Cluster-17807.86378								
BocERF101	Cluster-17807.158542	XM_013881405.3	1035	344	38257.94	9.41	5328	66.37	-0.601
BocERF102	Cluster-17807.154886	XM_018637720.2	987	328	35960.77	5.59	4959	58.11	-0.658
	Cluster-17807.28766								
	Cluster-17807.28767								
	Cluster-17807.3601								
	Cluster-17807.9257								
BocERF103	Cluster-17807.7525	XM_033286625.1	708	235	25936.45	4.65	3575	61.4	-0.57
BocERF104	Cluster-17807.25925	XM_048770003.1	933	310	33777.88	7.8	4725	76.35	-0.4
BocERF105	Cluster-17807.147387	XM_048775894.1	1224	407	44685.89	5.7	6108	55.9	-0.711
	Cluster-17807.147397								
BocERF106	Cluster-17807.154001	XM_048777716.1	831	269	30064.83	5.28	4182	68.92	-0.518
	Cluster-17807.32361								
BocERF107	Cluster-17807.27028	XM_048777716.1	831	269	30147.91	5.28	4195	68.92	-0.531
BocERF108	Cluster-17807.126599	XM_048778063.1	588	197	21881.98	6.55	2996	57.11	-0.959
	Cluster-17807.32997								
BocAP2-1	Cluster-17807.147385	XM_013767819.1	1245	414	45173.61	6.22	6181	55.22	-0.67
BocAP2-2	Cluster-17807.147389	XM_013878360.3	1254	417	45598.91	6.61	6225	50.14	-0.75
BocAP2-3	Cluster-17807.84134	XM_009105449.3	1365	454	49530.13	6.48	6758	50.35	-0.782
	Cluster-17807.62454								
BocAP2-4	Cluster-17807.62453	XM_009105450.3	1320	439	47816.23	7.09	6520	48.52	-0.817
BocAP2-5	Cluster-17807.138105	XM_013732410.1	927	308	35001.58	7.69	4826	53.31	-0.952

BocAP2-6	Cluster-17807.21178	XM_013732410.1	927	308	35041.69	7.69	4837	54.9	-0.93
BocAP2-7	Cluster-17807.134397	XM_013737986.1	1680	559	61778.02	6.84	8432	56.21	-0.703
BocAP2-8	Cluster-17807.134400	XM_013737986.1	1680	559	61876.08	6.82	8441	55.51	-0.72
BocAP2-9	Cluster-17807.157237	XM_013738114.1	1086	361	40835.46	9.11	5632	55.12	-0.831
	Cluster-17807.102797								
	Cluster-17807.107776								
	Cluster-17807.132097								
	Cluster-17807.102796								
	Cluster-17807.30266								
	Cluster-17807.30267								
	Cluster-17807.58977								
	Cluster-17807.13200								
BocAP2-10	Cluster-11338.0	XM_013751793.1	1767	588	65562.77	6.22	8957	59.18	-0.773
BocAP2-11	Cluster-17807.11162	XM_013763251.1	1668	555	61816.26	7.82	8462	56.59	-0.7
	Cluster-17807.36325								
BocAP2-12	Cluster-28007.0	XM_013763251.1	1668	555	61802.19	7.44	8455	56.59	-0.699
BocAP2-13	Cluster-17807.147394	XM_013767819.1	1239	412	45084.42	6.43	6159	50.75	-0.728
BocAP2-14	Cluster-25753.0	XM_013767843.1	1704	567	63688.79	6.29	8696	56.01	-0.817
BocAP2-15	Cluster-25753.1	XM_013767843.1	1713	570	63967.23	6.47	8743	56.58	-0.789
BocAP2-16	Cluster-25753.4	XM_013767843.1	1704	567	63726.8	6.24	8697	56.37	-0.814
BocAP2-17	Cluster-17807.110560	XM_013783234.1	1014	337	38162.08	6.48	5255	55.34	-0.958
BocAP2-18	Cluster-17807.91274	XM_013775779.1	1320	439	47652.97	6.73	6502	49.64	-0.799
BocAP2-19	Cluster-8935.0	XM_013823335.3	1701	566	63609.9	6.47	8701	57.31	-0.795
BocAP2-20	Cluster-11675.0	XM_013833245.3	1014	337	38162.08	6.48	5255	55.34	-0.958
	Cluster-17807.55661								
BocAP2-21	Cluster-17807.147390	XM_013878360.3	1296	431	47272.81	6.08	6461	53.25	-0.719
BocAP2-22	Cluster-17807.147392	XM_013878360.3	1254	417	45598.91	6.61	6225	50.14	-0.75
	Cluster-17807.147395								
BocAP2-23	Cluster-17807.147400	XM_013878360.3	1254	417	45584.89	6.61	6222	49.9	-0.749
BocAP2-24	Cluster-17807.147402	XM_013878360.3	1254	417	45583.98	6.61	6231	51.08	-0.731
BocAP2-25	Cluster-17807.147412	XM_013878360.3	1254	417	45320.72	6.14	6199	54.12	-0.676
	Cluster-17807.147398								
BocAP2-26	Cluster-17807.147411	XM_013878360.3	1254	417	45612.98	6.84	6232	50.14	-0.751
	Cluster-17807.157563								
	Cluster-5730.0								
BocAP2-27	Cluster-23389.0	XM_018590187.2	1692	563	63087.26	6.12	8637	59.88	-0.753

<i>BocAP2-28</i>	Cluster-17807.37117	XM_019237897.1	732	243	27238.56	4.78	3712	57.9	-0.813
<i>BocAP2-29</i>	Cluster-17807.134396	XM_022700009.2	1674	557	62008.39	7.83	8496	57.58	-0.738
<i>BocAP2-30</i>	Cluster-17807.134401	XM_022700009.2	1674	557	62020.64	7.45	8510	58.64	-0.682
<i>BocAP2-31</i>	Cluster-17807.134404	XM_022700009.2	1674	557	61939.41	7.82	8496	59.16	-0.712
<i>BocAP2-32</i>	Cluster-17807.134407	XM_022700009.2	1674	557	61969.44	7.82	8500	59.16	-0.712
<i>BocAP2-33</i>	Cluster-17807.21179	XM_048761637.1	918	305	34666.22	7.69	4781	53.21	-0.961
<i>BocAP2-34</i>	Cluster-17807.147396	XM_048775893.1	1296	431	47182.78	6.43	6456	53.92	-0.72
<i>BocRAV1</i>	Cluster-17807.82390	XM_013782305.1	1026	341	38098.51	8.95	5303	67.36	-0.628
<i>BocRAV2</i>	Cluster-17807.49649	XM_013744055.1	1023	340	38033.54	9.46	5311	70.68	-0.6
<i>BocRAV3</i>	Cluster-17807.64403	XM_013744055.1	1014	337	38007.62	9.04	5292	69.02	-0.642
<i>BocRAV4</i>	Cluster-17807.132270	XM_013763661.1	1032	343	38415.43	9.53	5389	74.08	-0.475
<i>BocRAV5</i>	Cluster-17807.918	XM_013763730.1	1050	349	39109.04	9.31	5484	69.46	-0.628
<i>BocRAV6</i>	Cluster-17807.107998	XM_013766842.1	1059	352	39460.37	9.36	5527	69.74	-0.654
<i>BocRAV7</i>	Cluster-17807.36555	XM_013766842.1	1059	352	39529.56	9.24	5533	68.64	-0.657
<i>BocRAV8</i>	Cluster-17807.72819	XM_013782456.1	1116	371	40869.18	9.41	5712	65.96	-0.568
<i>BocRAV9</i>	Cluster-17807.87240	XM_013789359.3	1035	344	38620.36	9.15	5394	69.13	-0.647