

1	10	20	30	40	50	60	70	80	90
1	ATGGCGATGGTGGTGGTGGCGGGGCGGCAAGGACCGGTCTCGCCTGGCGGGCGGTGGGGCGCCGACAGGTGGACACGGGCAAGTACGTGCGCTACACC								
1	M A M V V V G G G K D R S S P G G G G A P Q V D T G K Y V R Y T								
97	106	116	126	136	146	156	166	176	186
33	CCCAGACAGGTGGAGGCGCTCGAGCGGGTCTACAGCGAGTGCCCAAGCCAGCTCGCTGCGCAGGCAGCAGCTCATCAGGGAGTGCCCCATACTC								
	P E Q V E A L E R V Y S E C P K P S S L R R Q Q L I R E C P I L								
193	202	212	222	232	242	252	262	272	282
65	AGCAACATCGAGCCCAGCAGATCAAGGTCTGGTTCCAGAACCAGGTGCCGCGAGAAGCAGCGGAAGGAGGCCTCGCGCCTGCAGACTGTGAAC								
	S N I E P K Q I K V W F Q N R R C R E K Q R K E A S R L Q T V N								
289	298	308	318	328	338	348	358	368	378
97	CGGAAGCTGACTGCGATGAACAAGCTGTTGATGGAGGAGAATGACAGGCTGCAGAAGCAGGTCTCCCGACTCGTCTACGAGAATGGGTACATGCGA								
	R K L T A M N K L L M E E N D R L Q K Q V S R L V Y E N G Y M R								
385	394	404	414	424	434	444	454	464	474
129	CAGCAGTCCATAATCCTTGCTGCGACCACAGACAGCTGTGAGTCTGTGGTCACAAGTGGTCAGCACCACCAACAGCAAAACCCAGCAGCT								
	Q Q L H N P S A A T T D T S C E S V V T S G Q H H Q Q Q N P A A								
481	490	500	510	520	530	540	550	560	570
161	CCGCGTCTCAACGGGACGCGAATAACCCAGCTGGTCTACTAGCTATCGCTGAGGAGACCTTGGCAGAGTTCTGTGCGAAAGCGACAGGAAGTGT								
	P R P Q R D A N N P A G L L A I A E E T L A E F L S K A T G T A								
577	586	596	606	616	626	636	646	656	666
193	GTCGATTGGGTGCAATGGTTGGGATGAAGCCTGGTCCGGATTCCATTGGAATCATCGCTGTTTCGCACAATTGTAGTGGCGTAGCAGCCCAGCT								
	V D W V Q M V G M K P G P D S I G I I A V S H N C S G V A A R A								
673	682	692	702	712	722	732	742	752	762
225	TGCGGCCTAGTGAGCCTTGAGCCCAAAAGTCGCGGAGATCCTCAAGGATCGCCCTTCTTGGTACCGCGACTGCCGGTGGCTGGATATCCTCCAT								
	C G L V S L E P T K V A E I L K D R P S W Y R D C R C V D I L H								
769	778	788	798	808	818	828	838	848	858
257	GTTATCCCTACGGGTAACGGTGGAACTATCGAGCTTATCTACATGCAGACTTACGCACCGACAACCTTGGCGGCACACGCGACTTTTGGACTCTC								
	V I P T G N G G T I E L I Y M Q T Y A P T T L A A P R D F W T L								
865	874	884	894	904	914	924	934	944	954
289	CGATACACTAGTGGTCTTGAGGATGGCAGTCTTGATCTGTGAGAGATCATTGACACAATCGACTGGAGGCCCATCAGGACCAACACCTCCAAAT								
	R Y T S G L E D G S L V I C E R S L T Q S T G G P S G P N T P N								
961	970	980	990	1000	1010	1020	1030	1040	1050
321	TTTGTGAGAGCCGAAGTGCTTCTAGTGGCTATTTGATTGACCTTGTGAGGGAGGTGGCTCCATGATTACATTGTGGATCATGTTGATTAGAT								
	F V R A E V L P S G Y L I R P C E G G G S M I H I V D H V D L D								
1057	1066	1076	1086	1096	1106	1116	1126	1136	1146
353	GCTTGGAGTGTGCCTGAGGTCTTAGACCACTTTATGAATCTCCAAAGATTCTTGCACAGAAAACAACCTATTGCTGCACTGCGCCACATTAGGCAA								
	A W S V P E V L R P L Y E S P K I L A Q K T T I A A L R H I R Q								
1153	1162	1172	1182	1192	1202	1212	1222	1232	1242
385	ATTGCGCATGAATCGAGTGGGGAAATGCCCTATGGAGGGGGCCGCCAGCCAGCGGTGTTGAGAACATTCAGCCAGAGGCTTAGCAGGGGTTTCAAT								
	I A H E S S G E M P Y G G G R Q P A V L R T F S Q R L S R G F N								
1249	1258	1268	1278	1288	1298	1308	1318	1328	1338
417	GATGCTGTCAATGGGTTTCCAGATGACGGCTGGTCACTGATGAGCAGTGACGGTGTGAGGATGTTACTATTGCTATCAACTCCTCTCCAAACAAA								
	D A V N G F P D D G W S L L M S S D G A E D V T I A I N S S P N K								
1345	1354	1364	1374	1384	1394	1404	1414	1424	1434
449	CTTATTGGTTTTCATGTCAACTCCTCCAGCTGTTTACTGCGATTGGAGGTGGCATCCTGTGTGCTAAGGCATCAATGCTGCTTCAAGATGTGCCA								
	L I G S H V N S S Q L F T A I G G G I L C A K A S M L L Q N V P								
1441	1450	1460	1470	1480	1490	1500	1510	1520	1530
481	CCTGCCCTACTAGTAGCATTCTGAGGGAGCATCGCTCCGAATGGGCTGATCCTGGTGTGATGCTTATTCTGCTGTGCTCTGAGGGCTAGTCCA								
	P A L L V R F L R E H R S E W A D P G V D A Y S A A A L R A S P								
1537	1546	1556	1566	1576	1586	1596	1606	1616	1626
513	TATGCAGTTCCTGGCTTGGCGCTAGTGGGTTTATGGGCAGCCAGGTATTCTACCGCTTGCACATACCTTAGAGAAATGAAGAGTTCCTGGAGGTT								
	Y A V P G L R A S G F M G S Q V I L P L A H T L E N E E F L E V								
1633	1642	1652	1662	1672	1682	1692	1702	1712	1722
545	ATTAGGCTTGAGGGACACAGCCTCTGCCATGATGAAGTTGTTCTGTGACGAGATATGTATCTTCTGAGTTGTGAGTGGCGTGGATGAAAATGCA								
	I R L E G H S L C H D E V V L S R D M Y L L Q L C S G V D E N A								
1729	1738	1748	1758	1768	1778	1788	1798	1808	1818
577	GCTGGTGCATGTGCACAGCTTGTCTTTGCACCCATCGATGAATCTTTTGCTGATGATGCACCACTGTACCCCTCAGGCTTCCGTGTCAATCCACTG								
	A G A C A Q L V F A P I D E S F A D D A P L L P S G F R V I P L								
1825	1834	1844	1854	1864	1874	1884	1894	1904	1914
609	GACGCAAGACGGATCCACCATCAGGCACACGCACACTTGACATAGCATCTACTCTTGAGGTTGGATCTGGTGGGACTACTCGTGTTCAGTGTAT								
	D A K T D P P S G T R T L D I A S T L E V G S G G T T R V S S D								
1921	1930	1940	1950	1960	1970	1980	1990	2000	2010
641	GCCTCCAGCACCTGCAACACAAGATCAGTGCTGACCATTGCTTTCCAGTTCTCATATGAGAATCACCTACGGGAAAGCGTCGCAGCAATGGCCAGG								
	A S S T C N T R S V L T I A F Q F S Y E N H L R E S V A A M A R								
2017	2026	2036	2046	2056	2066	2076	2086	2096	2106
673	CAATATGTGAGACTGTGGTGGCATCGGTGCAGAGGTTGGCCATGGCAATAGCTCCTTCCCGTCTTGGTGGACAGCTGAAATGAAGCAAACTCCA								
	Q Y V R T V V A S V Q R V A M A I A P S R L G G Q L E M K Q T P								
2113	2122	2132	2142	2152	2162	2172	2182	2192	2202
	GGATCTCTGAGGCACACACACTTGCAAGGTGGATCGGCAGGAGCTACAGGTTTCACACTGGAGCGGAACTCCTTCGCACAGACACCCAATGCAC								

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705      G S P E A H T L A R W I G R S Y R F H T G A E L L R T D T Q C T

          2218      2228      2238      2248      2258      2268      2278      2288      2298
2209    GATGCTTCCTTGAAAGCACTGTGGCAACTCAGACTCGATCATGTGCTGTTCCCTGAAGGCTACTCCTGTGTTACCTTCGCCAACCAAGCCGGC
737      D A S L K A L W Q H S D S I M C C S L K A T P V F T F A N Q A G

          2314      2324      2334      2344      2354      2364      2374      2384      2394
2305    CTCGACATGCTGGAGACGACGTTGATTGCTCTCCAGGACATCTCCCTTGAGAAGATCCTTGATGATGATGGCAGGAAGGCGCTCTGCACTGAGTAC
769      L D M L E T T L I A L Q D I S L E K I L D D D G R K A L C T E Y

          2410      2420      2430      2440      2450      2460      2470      2480      2490
2401    CCTAAGATTATGCAGCAGGGCTTCGCATACCTCCCCGGCGGCGTGTGTGTATCGAGCATGGGGCGGCCGGTGTGCGTACGAGCAGGCGGTGGCGTGG
801      P K I M Q Q G F A Y L P G G V C V S S M G R P V S Y E Q A V A W

          2506      2516      2526      2536      2546      2556
2497    AAGGTCCTGAGCGACGACGACACCCGCACTGCCTCGCCTTCATGTTTCGTGAACTGGTCCTTCGTGTGA
833      K V L S D D D T P H C L A F M F V N W S F V *

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Supplementary Figure S6 ORF sequence of *SsHB15* and its encoding protein. The protein marked with yellow color represents the Homeodomain (PF00046)