

Gene: JPH2 - Sequence: NG_031867.1
Date : January 8, 2015

Exon 1 | Start: 1 | End: 1252 | Length: 1251

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atagatggttgcttcttgaccaagttctccccggcttccaggggtggagggagctcagg
gtggtgagtgagcactggactgagattctgtgtatcttcagaccctgtttccacagcct
ccccctctctttctgacttcctcctctgctttcggaagcacatgtgaaactgtctccatt
cctttctcttttaggtcactggattccttgatggggctggcagtggtgctgtaaccccagg
tccccttagggcatgtgagtgggtgatggggctgagatctgccaacctcctcgctctgggg
      |-869      |-859      |-849      |-839      |-829      |-819
GGATTTTCAGTGTTCCAGGACTGGGTGTTCTGCTGGTCTCCCTCTCCCCTCCCTTCCCCG
      |-809      |-799      |-789      |-779      |-769      |-759
ATTCCCCGGTGCCCTCCCTGCGCGCAGACCCAGGGGACTCTGAGAATGGAAGGGAGCTCT
      |-749      |-739      |-729      |-719      |-709      |-699
CATTCCTGGGAGGAAAAAGACACCAGGTTCCCTGGGCTGCCTGCACTCAGTTCTCAGCCTC
      |-689      |-679      |-669      |-659      |-649      |-639
CTTCCTCATGCCTCCAGCCACTGCCCGGGTCTGCGGCACGGGCGGATTTGAAATACCCC
      |-629      |-619      |-609      |-599      |-589      |-579
TCCTTCCCGCTTTGAAGAAGGCTGGGCTGGCTGGGGGTATTTTGGGAGCAGCTTCTGAG
      |-569      |-559      |-549      |-539      |-529      |-519
ATCCAATGGCCTTGTTAGGGCAACACTGACCTTCCGTCCCAGAAGGAGGGCAGGATTGG
      |-509      |-499      |-489      |-479      |-469      |-459
AGAAGGGGGCGGGGCAGCGGGGAGACCGACAGCCCCGCACCCCACTGGGGTGGAGA
      |-449      |-439      |-429      |-419      |-409      |-399
AGGGGGCCAGCGGGCTGCGGGAATTCAGCCTCCGGCGGGGGCTGCCACCGAGGGGAATTT
      |-389      |-379      |-369      |-359      |-349      |-339
CCCCTCTTTGAAAAGGCTGGGGACCCCTCCACCCACCTTTCACTGGGCTTCTTAAAGA
      |-329      |-319      |-309      |-299      |-289      |-279
GATCACACCGTTTTCCCTTGACTTCTTGGAAGGCAGACTTGGGACGCTTGTGGGGACT
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|111

|121

agctggggggcccgagaggtgggggtggagccagggaggggtgagaaaccctgggtggaggggt
gggaaaggcgaccggcaattggcacagaatcagatgggctaggaagtgatttgctgtgtg
gttttgggcaagctgctctacctttctgagcttccattttctttagtaaagatggagct
aataaaggggttattgagaggattagtggcagtgccttagtacaagcctgccatgtaagt
gcacactcaacacacaataaaatataactactaccattagcatgttcggtat

Exon 2 | Start: 1253 | End: 2042 | Length: 789

ccaacatttgactaccatgcgaactcactagcttatccgttcacgacttgtgaccttgc
catgttcccaccaacgtattcctaccatcgtgcaagctcctcctggctcaccactcgtg
ttattgcacactcgagtagactcaaactcatagcactgtgcaccctgaccctcagacg
gccttgcgctctcgggtcccaccccgcttggccactcccggccttgccctcccaggcca
ccgtgcacacgcggggacccgctcgtgccgcctactgacgcgccctctcctcgccgcagg

381	391	401	411	421	431														
GGACGTACCAAGGCCAGTTCACCAACGGCATGCGCCATGGCTACGAGTACGCCAGAGCG																			
T	Y	Q	G	Q	F	T	N	G	M	R	H	G	Y	G	V	R	Q	S	V
				131															141

441	451	461	471	481	491														
TGCCCTACGGGATGGCCGTGGTGGTGGCGCTCGCCGCTGCGCACGTCGCTGTCGTCCCTGC																			
P	Y	G	M	A	V	V	V	R	S	P	L	R	T	S	L	S	S	L	R
			151																161

501	511	521	531	541	551														
GCAGCGAGCACAGCAACGGCACGGTGGCCCCGGACTCTCCCGCCTCGCCGGCCTCCGACG																			
S	E	H	S	N	G	T	V	A	P	D	S	P	A	S	P	A	S	D	G
			171																181

561	571	581	591	601	611														
GCCCCGCGCTGCCCTCGCCCGCCATCCCGCGTGGCGGCTTCGCGCTCAGCCTCCTGGCCA																			
P	A	L	P	S	P	A	I	P	R	G	G	F	A	L	S	L	L	A	N
			191																201

621	631	641	651	661	671
ATGCCGAGGCGGCCGCGGGCGCCCAAGGGCGGCGCCTCTTCCAGCGGGGCGCGCTGC					
A	E	A	A	R	A
			P	K	G
			G	G	L
			F	Q	R
			G	A	L
			L		
	211			221	
681	691	701	711	721	731
TGGGCAAGCTGCGGCGCGCAGAGTCGCGCACGTCCGTGGGTAGCCAGCGCAGCCGTGTCA					
G	K	L	R	R	A
			E	S	R
			T	S	V
			G	S	Q
			R	S	R
			V	S	
	231			241	
741	751	761	771	781	791
GCTTCCTTAAGAGCGACCTCAGCTCGGGCGCCAGCGACGCCGCGTCCACCGCCAGCCTGG					
F	L	K	S	D	L
			S	S	G
			A	S	D
			A	A	S
			T	A	S
			L	G	
	251			261	
801	811	821	831	841	851
GAGAGGCCGCCGAGGGCGCCGACGAGGCCGCACCCCTTCGAGGCCGATATCGACGCCACCA					
E	A	A	E	G	A
			D	E	A
			A	P	F
			E	A	D
			I	D	A
			T	T	
	271			281	
861	871	881	891	901	911
CCACCGAGACCTACATGGGCGAGTGAAGAACGACAAACGCTCGGGCTTCGGCGTGAGCG					
T	E	T	Y	M	G
			E	W	K
			N	D	K
			R	S	G
			F	G	V
			S	E	
	291			301	
921	931	941	951	961	971
AACGCTCCAGTGGCCTCCGCTACGAGGGCGAGTGGCTGGACAACCTGCGCCACGGCTATG					
R	S	S	G	L	R
			Y	E	G
			E	W	L
			D	N	L
			R	H	G
			Y	G	
	311			321	
981	991	1001	1011	1021	1031
GCTGCACCACGCTGCCCCGACGGCCACCGCGAGGAGGGCAAGTACCGCCACAACGTGCTGG					
C	T	T	L	P	D
			G	H	R
			E	E	G
			K	Y	R
			H	N	V
			L	V	
	331			341	
1041	1051	1061	1071	1081	1091
TCAAGGACACCAAGCGCCGCATGCTGCAGCTCAAGAGCAACAAGGTCCGCCAGAAAAGTGG					
K	D	T	K	R	R
			M	L	Q
			L	K	S
			N	K	V
			R	Q	K
			V	E	
	351			361	
1101	1111	1121	1131	1141	1151
AGCACAGTGTGGAGGGTGCCAGCGCGCCGCTGCTATCGCGGCCAGAAGGCCGAGATTG					
H	S	V	E	G	A
			Q	R	A
			A	A	I
			A	R	Q
			K	A	E
			I	A	
	371			381	

|1161
CCGCCTCCAGgttaggacagcggtgggggtgggaaggggtcgctccctcggagaagggg
A S R

gtcctggggcagggcaacctaggaggccctgtctccaagcctgattctgcttcttttacc
cccatcaccttcaggggttaattggaggctcttcgggagctggtggctcctgttactca
cccatccatccatcactcagttacaccagcccttcactgacttaaccctaccactcac
ccaacctttctaatatccacctgaacagccatctctccagtcactccattccccta
cccatccac

Exon 3 | Start: 2043 | End: 2161 | Length: 118

ccaagcctggaaatagcatacatgatgtcttcccataatgcactggccagaactcagtca
cctgaccacacctaactgcaagggagggttgggaaaggtagtctatctaagtgtcagaaa
gaagaagaaatgatctggagaatgcatagcagtctgggccatgaggctcaataaatattc
attgactgcctgcgtgaaagaatgtgtgttttagcatgtctctttgtgggttggggagaa
ggggcagaaggctggttctctggaaggatcctgagtcttctgccacattgtctccatagg

1171	1181	1191	1201	1211	1221
GACAAGCCACGCCAAGGCCAAAGCTGAGGCAGCGGAACAGGCCGCCCTGGCTGCCAACCA					
T S H A K A K A E A A E Q A A L A A N Q					
391			401		

1231	1241	1251	1261	1271	1281
GGAGTCCAACATTGCTCGCACTTTGGCCAGGGAGCTGGCTCCGGACTTCTACCAGCCAGg					
E S N I A R T L A R E L A P D F Y Q P G					
411			421		

tagggccagccaggggaaggatgggcagggtagggtatccctagggtgggcgcttttctt
tgcttactggaatctgagatgcccgaagtgggttcttgatgcccgtagtctcagaaact
ggggcatggtgcaaattgtgggatgggatgatgcaggggtagggtggggagacacatctctg

ccttcatgctgagctcgaggggagggcagcagagtcactccaagtggctctttctctctg
ctctgagcaggggaagacagttggagctggtgaagcttagaggagagaagtcactggtgg

Exon 4 | Start: 2162 | End: 2883 | Length: 721

cagactgctgggtgctagtcctggctctgcccttcgacagctgtgtgtctttgggcaagt
gatttaacctctcagagcctccctttgaggttcacagtagcatcaacttcatagggatac
tacagggattagatgagttaatatattggaaagtgcttggaacagtcctggcacttggtc
agtgtatgtgagtgccgactgagcccatgaatgaggctcgagaggtgaagtggctggcc
caggatcacccaacagtgggtgcggggttcgagcccagcctccctgtgttgccctggcagg

1291	1301	1311	1321	1331	1341
GTCCGGAATATCAGAAGCGCCGGCTGCTGCAGGAGATCCTGGAGAACTCGGAGAGCCTGC					
P E Y Q K R R L L Q E I L E N S E S L L					
431			441		

1351	1361	1371	1381	1391	1401
TGGAGCCCCCGACCGGGGCGCGCGCAGCGGCCTCCCACAGCCGCCCCGCGAGAGGCC					
E P P D R G A G A A G L P Q P P R E S P					
451			461		

1411	1421	1431	1441	1451	1461
CGCAGCTGCACGAGCGTGAGACCCCTCGGCCCCGAGGGTGGCTCCCCGTCACCGGCCGGA					
Q L H E R E T P R P E G G S P S P A G T					
471			481		

1471	1481	1491	1501	1511	1521
CGCCCCCGCAGCCCAAGCGGCCAGGCCCGGGTGTCCAAGGACGGCCTGCTGAGCCCAG					
P P Q P K R P R P G V S K D G L L S P G					
491			501		

1531	1541	1551	1561	1571	1581
GCGCCTGGAACGGCGAGCCCAGCGGTGAGGGCAGCCGGTCAGTCACTCCGTCCGAGGGCG					
A W N G E P S G E G S R S V T P S E G A					
511			521		

1591	1601	1611	1621	1631	1641
CGGGCCGCCGAGCCCCGCGCTCCAGCCACCGAGCGCATGGCCATCAGGGCTCTGCAGG					

G R R S P A R P A T E R M A I E A L Q A
 |531 |541

 |1651 |1661 |1671 |1681 |1691 |1701
 CACCGCCTGCGCCGTCGCGGGAGCCGAGGTGGCGCTTTACCAGGGCTACCACAGCTATG
 P P A P S R E P E V A L Y Q G Y H S Y A
 |551 |561

 |1711 |1721 |1731 |1741 |1751 |1761
 CTGTGCGCACACGCGCCCGAGCCCCACCCTTTGAGGACCAGCCCGAGCCCGAGGTCT
 V R T T P P E P P P F E D Q P E P E V S
 |571 |581

 |1771 |1781 |1791 |1801 |1811 |1821
 CCGGGTCCGAGTCCGCGCCCTCGTCCCCGCCACGCCCCGCTGCAGGCCCCACGCTCC
 G S E S A P S S P A T A P L Q A P T L R
 |591 |601

 |1831 |1841 |1851 |1861 |1871 |1881
 GAGGCCCCGAGCCTGCACGCGAGACCCCGCCAAGCTGGAGCCCAAGCCCATCATCCCCA
 G P E P A R E T P A K L E P K P I I P K
 |611 |621

 |1891 |1901 |1911 |1921 |1931 |1941
 AAGCCGAGCCAGGGCCAAGGCCGCAAGACTGAGGCTCGAGGGCTGACCAAGGCGGGGG
 A E P R A K A R K T E A R G L T K A G A
 |631 |641

 |1951 |1961 |1971 |1981 |1991 |2001
 CCAAGAAGAAGGCGCGGAAGGAGGCGCACTGCGGCAGAGCGGAGGTGGAGGTGGAAG
 K K K A R K E A A L A A E A E V E V E E
 |651 |661

AGgtgaggctgtcgggcaaggtgtgcctaaggtcgggttcctagaggtagcagggttg

agggaggattcaggggcaggggatttgggggttgctggggtgcgagagaccgaagcagga
 tagagcaggaggaaatgctgcagggtgaggattaggggagcatagccttggttggtcc
 acagaggacgttggagcgtaaattggccgatggagtcctcctacctttgcacctggtatc
 ccattggcagagacagttctcatgagcaggggcagctgggagcctgagcagctggagggt

gg

Exon 5 | Start: 2884 | End: 2978 | Length: 94

gaatgcgtcccaagggaattagcaggatgcctgggttcaggcctgattcacacactat
atgacttggggcatgatcttgtccctccctgggtcctgagggatttggtattttctaaga
gtccttccagctgtgatggctctgccatccaggtgacaggatacagcagtgaacaaagccg
gcaatgctcttaggaaggtccatccagaagttcctgctctgtccagccttgctgtgacct
gggtggggggtgtctccgaggccatggggactcaggaagcctctctccactgctcccagg

2011	2021	2031	2041	2051	2061
GTCCCCAACACCATCCTCATCTGCATGGTGATCCTGCTGAACATCGGCCTGGCCATCCTC					
V P N T I L I C M V I L L N I G L A I L					
671			681		

2071	2081	+1	+11
TTTGTTACCTCCTGACCTGACCGTCGCTTACCAGgtgcagccagctggctggaggaggg			
F V H L L T *			
691			

gttggggggcaggagcccctggggagttttgagcaccagggtgggtgggaggaggaccta
ctcgggtacttggtatgacagtcctgtgactaattgaggcccaccacactgcagaagccaag
acctagagtgtgatttgataccagcgcacacacacacacacacacacacacacacaca
cacacacacttacttcattagcttagtgtttgagagcacctgctctctgtcaggtga
gcactgagggttcattcattcattcatttggcca

Exon 6 | Start: 2979 | End: 4785 | Length: 1806

agggtgaaaaggagtgaaccagatgacagtggggggaggaagagggaagagatgagtgcag
cagcaaagggaacagcatgtgtaaataaacaggcaggcagccagggccaggagaggcctc

ggggacccgtttgtgacctgccgagtatcagaatcaaggacagggtgtctgggggat
 gcagaggtgggatcttgcagagagaagatgagccccaaggcttgagccctgcacctggc
 ttggcggcccagcctctgccctccctcccttgaccttttgctgtctctttgcaga
 | +21 | +31 | +41 | +51 | +61 | +71
 AGCCAGAAGTTCCTGCTGAGGACATGAGGACCCGTCTTTTGCAGTGCCAGGCAGGGTGG
 | +81 | +91 | +101 | +111 | +121 | +131
 CCAAAGAGGACTGGACTCTGGACCTGGAGCCCCGTGGTCCAGTTCACATTACCCCCACAA
 | +141 | +151 | +161 | +171 | +181 | +191
 GAGTTTCAGGAGGCCTCCACGGTGCCTGTGCTGGGTGGCGGTGGTGGTGCCAAGAGGAA
 | +201 | +211 | +221 | +231 | +241 | +251
 TGAATGTCCTGGGCTCCTTCAGGAGCTCTCTACCCAGGGGCAAGGAGAGCCCAGAGAGA
 | +261 | +271 | +281 | +291 | +301 | +311
 AGCGCCCTGGTCTCTTGAGCTTCCTGATCTGCTCCTGTCCCCCGCTCTCCTCCACTCCCT
 | +321 | +331 | +341 | +351 | +361 | +371
 TGCCTTTCCTAGGTTGTCCCTCCCTGGGCTTTTGTGTGTTTGGGAGATGTCACCTAA
 | +381 | +391 | +401 | +411 | +421 | +431
 CCAGGACATTGATATTCAATCCCATCCCCCTCCTCCCACCCTGCCCCACTTTGATTAA
 | +441 | +451 | +461 | +471 | +481 | +491
 TCCTTTGGCTGTGGGCTGAGGCCTCCAGGGAAGCTGGGTGGGGTGGGTGTTGAGACCCC
 | +501 | +511 | +521 | +531 | +541 | +551
 CTCAGACCAGCACAGAGACCTGTCTTGTGCAGTCTGCACCCTGCACTCCCTCCCTTGCC
 | +561 | +571 | +581 | +591 | +601 | +611
 TGTAATGTTCTGGATGACAGTAGAGGAAATGGACAAGGTCAGTTTGAATATCCAGAAC
 | +621 | +631 | +641 | +651 | +661 | +671
 ACAGTGCTCTGTCTCCTCCCACAGTCCAGTTAGCTTCCCTTCTGGACCAATAGACGAGG
 | +681 | +691 | +701 | +711 | +721 | +731
 GGAGACCCCATGGATCCTCTGGCTGGGAAGCCACTGACCAGGTGGCCAGGGGGCAGGGTG
 | +741 | +751 | +761 | +771 | +781 | +791
 GGAAGAGGGGTTAAGGTGCAGTGATGATGGCCTGTTTTGGAGTGTGTCTGAGACTGGGAT
 | +801 | +811 | +821 | +831 | +841 | +851

TGCATTTGGGGTTTCCCGTGTGCTTGGGATGCTAGAGGGTCACCTGCAGGAGGCCTGGGG

|+861 |+871 |+881 |+891 |+901 |+911
CCGGCGAGAAATCTCCTGTGATGCCCTGTGAAATGGCTTGTCTCCTCCCCATCAGGGCC

|+921 |+931 |+941 |+951 |+961 |+971
CACCGAAAGCTCAGGGGAGCACAGAAGCCCATGGAAGCCCAGGGAGATGTCCCTGGGGCA

|+981 |+991 |+1001 |+1011 |+1021 |+1031
GACACTAAGGCAGGTGTTGAAGACAAGCTGCTTGTCAAGAAGCATTTCGGCAAGAGAG

|+1041 |+1051 |+1061 |+1071 |+1081 |+1091
GGGCAAGTCTGGGGCTCCAAGTGGGTACAGCCTGGGTGCAGTTATAAGCCCTTTGGCTT

|+1101 |+1111 |+1121 |+1131 |+1141 |+1151
ACTTGGTAGAAGATGGCTACTTGGATGTACCTCACTTAAAGATGTTTTGTACCACACTAG

|+1161 |+1171 |+1181 |+1191 |+1201 |+1211
GTCTCTGGGCCCTTGTGCTTCCTGTGGGTGGGGTGAGGGCCAAAGGCTATGGTTTCCTGC

|+1221 |+1231 |+1241 |+1251 |+1261 |+1271
CTCCAGGAGAATGGAGAGAAAGGGCTTCCAGGCCCTCCAAGCCTGGGGAAGGACGTGGC

|+1281 |+1291 |+1301 |+1311 |+1321 |+1331
ATCCAAGCTGAGCCAGAGGGAAGTGTGCTGTCTCCCTTCATTTCTGTGGACCTTGGAG

|+1341 |+1351 |+1361 |+1371 |+1381 |+1391
GCTTTGGCTTTGTGGCAGGGCCTCCCCAGGCAGCTCTGGGACCTAGGAGTTTGCTTCTGA

|+1401 |+1411 |+1421 |+1431 |+1441 |+1451
TAGGGTCAGCTTTCCCATTTCCCTTCAATGCTTGGGAACCTTCTCCCTTAGCTTCACACT

|+1461 |+1471 |+1481 |+1491 |+1501 |+1511
TGCCGTTTCAAGCCCTGCTGGGACCTTGTGGCTTGGCTGGAATCCAGGACTGTATTTTCA

|+1521 |+1531 |+1541 |+1551 |+1561 |+1571
TGGAGAAGAACCTGCAGATTCTTCCATCCTCAGCTGGCCATGGCCCACAGCTCTGCATCT

|+1581 |+1591 |+1601 |+1611 |+1621 |+1631
GCATCTGAGCTTCTCAAGACTCCTGGAGCATGAGGGGAATGGGGCGGGGCACTGCTCTG

|+1641 |+1651 |+1661 |+1671 |+1681 |+1691
TGCTGACGGGCTCCGTCTCGGAGATTCTTGTCTGTTTTTTTCTGTTGTTTTTTTTTGG

|+1701 |+1711 |+1721 |+1731 |+1741 |+1751
CTGGTGCTGGGGACAAGCCTGTGCCTGCCAAAGCTCCCAGGCCAAGTTTGGGGGCTGGTG

|+1761 |+1771 |+1781 |+1791 |+1801 |+1811
TTTGGGGTTGGGTTTGGGGTTCAGGATGCTGCAGTCTGTGCAATAATAAACCCGCATCTG

 |+1821
CTCACGGgctctggctgggctgcaatgtgcttgtgggtccaggatgaggggctggctcaa

ggagggtgggtgggaagaggctgggggacgtgggtccttcccatctgtgtccttgttctc

acgaccttgaggggcagctgaagggttcagtttgagtgggggctgaaagaccatagag

cttctacagtggagtttctaaagcaaacttccagaaacttctatgagtagatgacaatag

aatcaagagcctgccctttgaggtggagtccccccagcctccaatgctagcccagccact

ttcttcg