

137

hHNF1a

2210 2220 2230 2240 2250 2260 2270 2280 2290 2300
 * * * * * * * * * *
 2201 G C A G A G G G A A G T G G C T C A G C A G T T T A C C C A T G C C G G C C A A G G C G G C T G A T C G A A G A G C C C A C C G G C G A T G A G C T G C C T A C C A A G A A G G G A A G G A G G A A C 2300
 Q R E V A Q Q F T H A G Q G G L I E E P T G D E L P T K K G R R N
 170

hHNF1a

2310 2320 2330 2340 2350 2360 2370 2380 2390 2400
 * * * * * * * * * *
 2301 A G G T T C A A G T G G G A C C T G C C T C C C A G C A G A T C C T G T T T C A G G C C T A C G A G A G G C A G A A A C C C T A G C A A A G A G G A G A G G A G A C C C T G G T G G A A G A G T 2400
 R F K W G P A S Q Q I L F Q A Y E R Q K N P S K E E R E T L V E E C
 203

hHNF1a

2410 2420 2430 2440 2450 2460 2470 2480 2490 2500
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 2401 G C A A C A G A G C C G A A T G C A T C C A G A G G G C G T C A G C C T A G C C A G G C T C A G G G A C T G G G C A G C A A T C T G G T C A C C G A A G T G A G G G T G T A C A A C T G G T T C G C 2500
 N R A E C I Q R G V S P S Q A Q G L G S N L V T E V R V Y N W F A
 237

hHNF1a

2510 2520 2530 2540 2550 2560 2570 2580 2590 2600
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 2501 C A A C A G G A G A A A G G A G G A G G C C T T C A G A C A C A A G C T G G C T A T G G A T A C C T A C A G C G G A C C T C C T C C T G G A C C T G G A C C T G G A C C C G C T C T G C C T G C C C A T 2600
 N R R K E E A F R H K L A M D T Y S G P P P G P G P G P A L P A H
 270

hHNF1a

2610 2620 2630 2640 2650 2660 2670 2680 2690 2700
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 2601 T C C A G C C C G G A C T G C C T C C C C G C C T G A G C C C C T C C A A A G T G C A T G G A G T G A G G T A C G G C C A C C T G C C A C C A G C G A G A C C G T G A G G T G C C T A G C T 2700
 S S P G L P P P A L S P S K V H G V R Y G Q P A T S E T A E V P S S
 303

hHNF1a

2710 2720 2730 2740 2750 2760 2770 2780 2790 2800
 * * * * * * * * * *
 2701 C C A G C G G A G G A C C T C T G G T G A C C G T C T C C A C C C C C T G C A T C A G G T G A G C C C T A C A G G A C T G G A G C C C A G C C A G C C T G C T G A G C A C C G A G G C T A A G C T 2800
 S G G P L V T V S T P L H Q V S P T G L E P S H S L L S T E A K L
 337

hHNF1a

2810 2820 2830 2840 2850 2860 2870 2880 2890 2900
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 2801 G G T G T C C G C T G C C G G A G A C C T C T C C C T C C T G T G T C C A C C C T G A C C G C C T C C A C A G C C T G G A A C A G A C C T C C C C G G C C T G A A C C A A C A C C T C A G A A C 2900
 V S A A G G P L P P V S T L T A L H S L E Q T S P G L N Q Q P Q N
 370

hHNF1a

2910 2920 2930 2940 2950 2960 2970 2980 2990 3000
 * * * * * * * * * *
 2901 C T G A T C A T G G C C A G C C T G C C C G G A G T G A T G A C C A T C G G A C C T G G C G A G C C T G C T T C C C T G G G C C C A C A T T T A C C A A C A C A G G A G C C T C C A C A C T G G T G A 3000
 L I M A S L P G V M T I G P G E P A S L G P T F T N T G A S T L V I
 403

hHNF1a

3010 3020 3030 3040 3050 3060 3070 3080 3090 3100
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 3001 T C G G C C T G G C T T C C A C C C A G G C C C A G T C C G T G C C T G T G A T C A A C A G C A T G G G C T C C A G C C T G A C C A C A C T C C A A C C G T G C A A T T C A G C C A G C C T C T G C A 3100
 G L A S T Q A Q S V P V I N S M G S S L T T L Q P V Q F S Q P L H

437

hHNF1a

3110 3120 3130 3140 3150 3160 3170 3180 3190 3200
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 3101 CCCCTCCTACCAGCAGCCCTGATGCCCCCTGTGCAGTCCCACGTACCCCAATCCCCTTCATGGCCACAATGGCTCAGTGCAGTCCCCCATGCCCTG 3200
 P S Y Q Q P L M P P V Q S H V T Q S P F M A T M A Q L Q S P H A L
 470

hHNF1a

3210 3220 3230 3240 3250 3260 3270 3280 3290 3300
 * * * * *
 3201 TATGCCACAAGCCGAGGTGGCTCAATACACCCACACAGGACTGCTGCCCTCAGACCATGCTGATCACCACACCCCAACCTGTCGCCCTGGCCAGCC 3300
 Y S H K P E V A Q Y T H T G L L P Q T M L I T D T T N L S A L A S L
 503

hHNF1a

3310 3320 3330 3340 3350 3360 3370 3380 3390 3400
 * * * * *
 3301 TGACACCCACAAGCAGGTCTTTACCAGCGACACCGAGGCCAGCTCCGAAGCGGCCCTCCACACCCCTGCTTCCCAGGCTACCACCCTGCACGTGCCAG 3400
 T P T K Q V F T S D T E A S S E S G L H T P A S Q A T T L H V P S
 537

hHNF1a

3410 3420 3430 3440 3450 3460 3470 3480 3490 3500
 * * * * *
 3401 CCAAGATCTGCCGGAATCCAGCACCTGCAACCTGCTCACAGGTGAGCGCTTCCCCTACCCTGAGCTCCTCCAGCCTGGTCCGTACCAGTCCAGCGAC 3500
 Q D P A G I Q H L Q P A H R L S A S P T V S S S S L V L Y Q S S D
 570

hHNF1a

3510 3520 3530 3540 3550 3560 3570 3580 3590 3600
 * * * * *
 3501 AGCTCCAATGGCCAATCCCACCTGCTGCCAGCAACCATAGCGTTCATCGAGACCTTCATCAGCACCAGATGGCCTCCTCCAGCCAGGGATCTGGGCCCA 3600
 S S N G Q S H L L P S N H S V I E T F I S T Q M A S S S Q G S G A T
 603 1

hHNF1a

P2A

3610 3620 3630 3640 3650 3660 3670 3680 3690 3700
 * * * * *
 3601 CCAACTTCAGCCTGCTGAAACAGGCTGGCGACGTGGAAGAGAACCCCGACCTATGCACAGCGCCTTCTATGCTGGGCGCCGTAAGATGGAAGGCCA 3700
 N F S L L K Q A G D V E E N P G P M H S A S S M L G A V K M E G H
 6 1

P2A

hHNF3b

3710 3720 3730 3740 3750 3760 3770 3780 3790 3800
 * * * * *
 3701 CGAGCCATCTGACTGGTCCAGCTACTATGCCGAGCCTGAGGGCTACAGCAGCGTGTCCAATATGAATGCCGGCCTGGGCATGAACGGCATGAATACCTAC 3800
 E P S D W S S Y Y A E P E G Y S S V S N M N A G L G M N G M N T Y
 17

hHNF3b

3810 3820 3830 3840 3850 3860 3870 3880 3890 3900
 * * * * *
 3801 ATGAGCATGAGCGCCGCTGCCATGGGCTCTGGCTCTGGAATATGTCCGCCGAGCATGAACATGAGCAGCTATGTTGGCGCCGGAATGAGCCCATCTC 3900
 M S M S A A A M G S G S G N M S A G S M N M S S Y V G A G M S P S L
 50

hHNF3b

3910 3920 3930 3940 3950 3960 3970 3980 3990 4000
 * * * * *
 3901 TGGCCGGAATGCTCCTCGTGGTGGTCCATGGCTGGCATGGGAGGATCTGCTGGTGGTGGCGTTGCCGGAATGGGACCTCATCTGAGTCTAGCCT 4000
 A G M S P G A G A M A G M G G S A G A A G V A G M G P H L S P S L

198

hCEBPα

5810 * 5820 * 5830 * 5840 * 5850 * 5860 * 5870 * 5880 * 5890 * 5900 *

5801 ACCTGTGCCTTCTCCACATCCTGCTCCAGCTCTGGAGCTGCTGGACTTCTGGACCTGGCTCTGCTCTGAAAGGACTGGGAGCGCTCATCCCGATCTG 5900
P V P S P H P A P A L G A A G L P G P G S A L K G L G A A H P D L
231

hCEBPα

5910 * 5920 * 5930 * 5940 * 5950 * 5960 * 5970 * 5980 * 5990 * 6000 *

5901 AGAGCATCTGGTGGATCTGGCGCCGAAAGGCCAAGAAAAGCGTGGACAAGAAGCAAGTACAGAGTGGGAGAGAGCGGAACAATATCGCCGTGC 6000
R A S G G S G A G K A K K S V D K N S N E Y R V R R E R N N I A V R
264

hCEBPα

6010 * 6020 * 6030 * 6040 * 6050 * 6060 * 6070 * 6080 * 6090 * 6100 *

6001 GCAAGAGCAGAGACAAGGCCAAGCAGCGGAACGTGGAAACCCAGCAGAAGGTGCTCGAGCTGACCAGCGACAACGACCGCTGAGAAAGAGAGTGGAAACA 6100
K S R D K A K Q R N V E T Q Q K V L E L T S D N D R L R K R V E Q
298

hCEBPα

6110 * 6120 * 6130 * 6140 * 6150 * 6160 * 6170 * 6180 * 6190 * 6200 *

6101 GCTGAGCAGAGAGCTGGACACCTGCGGGGCATCTTTAGACAGCTGCCTGAGAGCAGCCTGGTCAAGGCCATGGGAAATTGTGCCGGAAGCGGCCACC 6200
L S R E L D T L R G I F R Q L P E S S L V K A M G N C A G S G A T
331 1

hCEBPα

P2A

6210 * 6220 * 6230 * 6240 * 6250 * 6260 * 6270 * 6280 * 6290 * 6300 *

6201 AACTTCAGCCTGCTTAACAGCGCCGCGAGCTCGAAGAAAATCCTGGGCCTATGCAGCGCCTGGTGGCTTGGGACCTGCTTGTTCCTTTGCCACCGC 6300
N F S L L K Q A G D V E E N P G P M Q R L V A W D P A C L P L P P P
6 1

P2A

hCEBPβ

6310 * 6320 * 6330 * 6340 * 6350 * 6360 * 6370 * 6380 * 6390 * 6400 *

6301 CACCTCCAGCCTTCAAGTCTATGGAAGTGGCCAACCTTCTACTACGAGGCGAGCTGTCTGGCCGCTGCCTATGGTGGAAAAGCAGCTCCTGCTGCACCACC 6400
P P A F K S M E V A N F Y Y E A D C L A A A Y G G K A A P A A P P
18

hCEBPβ

6410 * 6420 * 6430 * 6440 * 6450 * 6460 * 6470 * 6480 * 6490 * 6500 *

6401 AGCTGCTAGACCTGGACCTAGACCTCCTGCTGGCGAGCTGGGATCTATCGGCGATCACGAGAGGCCATCGACTTCAGCCCTTACCTGGAACCACTGGGC 6500
A A R P G P R P P A G E L G S I G D H E R A I D F S P Y L E P L G
51

hCEBPβ

6510 * 6520 * 6530 * 6540 * 6550 * 6560 * 6570 * 6580 * 6590 * 6600 *

6501 GCTCCTCAAGCTCCTGCACCAGCTACAGCCACCGATACCTTTGAAGCCGCTCCACCAGCACCAGCTCCGGCTCCAGCTTCTTCTGGACAGCACCACGACT 6600
A P Q A P A P A T A T D T F E A A P P A P A P A P A S S G Q H H D F
84

hCEBPβ

6610 * 6620 * 6630 * 6640 * 6650 * 6660 * 6670 * 6680 * 6690 * 6700 *

6601 TTCTGAGCGACCTGTTCAGCGAGACTACGGCGCAAGAACTGCAAGAAGCCTGCCGAGTACGGCTACGTGCTCACTGGGAGATGGGAGCTGCTAAGGG 6700
L S D L F S D D Y G G K N C K K P A E Y G Y V S L G R L G A A K G

118

hCEBPb

6710 6720 6730 6740 6750 6760 6770 6780 6790 6800
 * * * * *
 6701 CGCTCTGCACCCTGGATGTTTTGCCCTCTTCACCCTCCACCACCACCACCGCTCCACCAGCTGAACTGAAAGCCGAGCCTGGATTTCGAGCCCGCCGAC 6800
 A L H P G C F A P L H P P P P P P P P P A E L K A E P G F E P A D
 151

hCEBPb

6810 6820 6830 6840 6850 6860 6870 6880 6890 6900
 * * * * *
 6801 TGCAAGAGAAAAGAAGAAGCAGGCGCTCCTGGCGGAGGTGCTGGAATGGCTGCAGGCTTTCCTTACGCTCTGAGAGCCTACCTGGGCTACCAGGCTGTGC 6900
 C K R K E E A G A P G G G A G M A A G F P Y A L R A Y L G Y Q A V P
 184

hCEBPb

6910 6920 6930 6940 6950 6960 6970 6980 6990 7000
 * * * * *
 6901 CTAGCGGATCTTCTGGCAGCCTGAGCACAAGCAGCAGCTCTAGCCCTCCTGGCACACCTTCTCCAGCCGATGCTAAAGCCCTCCTACAGCCTGTTATGC 7000
 S G S S G S L S T S S S S S P P G T P S P A D A K A P P T A C Y A
 218

hCEBPb

7010 7020 7030 7040 7050 7060 7070 7080 7090 7100
 * * * * *
 7001 TGGCGCAGCTCCCGCTCCAAGCCAAGTGAAGTCCAAGGCCAAAAGACCGTGGATAAGCACTCCGACGAGTACAAGATCCGGCGGAGAGAAACAACATT 7100
 G A A P A P S Q V K S K A K K T V D K H S D E Y K I R R E R N N I
 251

hCEBPb

7110 7120 7130 7140 7150 7160 7170 7180 7190 7200
 * * * * *
 7101 GCCGTGCGGAAGTCTCGCGACAAAGCCAAGATGAGAAACCTGGAAACACAGCACAAGTCTGGAAGTACCAGCCGAGAACGAGAGACTGAGAAGAAGG 7200
 A V R K S R D K A K M R N L E T Q H K V L E L T A E N E R L Q K K V
 284

hCEBPb

7210 7220 7230 7240 7250 7260 7270 7280 7290 7300
 * * * * *
 7201 TTGAGCAGCTGAGCCGGGAAGTGGACACCTGAGGAACCTGTTCAAGCAGCTGCCAGAGCCTCTGCTGGCCTCTTCTGGCCATGTGGATCAGGGGCCAC 7300
 E Q L S R E L S T L R N L F K Q L P E P L L A S S G H C G S G A T
 318 1

hCEBPb

P2A

7310 7320 7330 7340 7350 7360 7370 7380 7390 7400
 * * * * *
 7301 AAATTCAGTCTGCTGAAGCAGGCAGGGGATGTTGAAGAGAATCCAGGACCAATGAGCAAGATCAGCCAGCAGAACAGCACCCCTGGCGTGAACGGCACC 7400
 N F S L L K Q A G D V E E N P G P M S K I S Q Q N S T P G V N G I
 6 1

P2A

hCEBPg

7410 7420 7430 7440 7450 7460 7470 7480 7490 7500
 * * * * *
 7401 AGCGTGATCCATACACAGGCCACCGCTCTGGACTGCAGCAAGTTCCTCAACTGGTGCCTGCTGACCAGGTGGCGGAGGAAAAGCTGTTGCCCTTAGCA 7500
 S V I H T Q A H A S G L Q Q V P Q L V P A G P G G G G K A V A P S K
 17

hCEBPg

7510 7520 7530 7540 7550 7560 7570 7580 7590 7600
 * * * * *
 7501 AGCAGAGCAAGAAATCTAGCCCATGGACCGGAACAGCGACGAATACCGTCAGCGGAGAGAAAACAATATGGCTGTGAAGAAGTCCCGCCTCAAGTC 7600
 Q S K K S S P M D R N S D E Y R Q R R E R N N M A V K K S R L K S

51

hCEBPg

	7610	7620	7630	7640	7650	7660	7670	7680	7690	7700	
	*	*	*	*	*	*	*	*	*	*	
7601	CAAGCAGAAAGCCAGGATACCTGCAGCGCGTGAACCAGCTCAAAGAGGAAAACGAGCGGCTGGAAGCCAAAATCAAGCTGCTGACCAAAGAAGTGAAGC										7700
	K Q K A Q D T L Q R V N Q L K E E N E R L E A K I K L L T K E L S										
	84										

hCEBPg

	7710	7720	7730	7740	7750	7760	7770	7780	7790	7800	
	*	*	*	*	*	*	*	*	*	*	
7701	GTGCTGAAGGACCTGTTCCTGGAACACGCCCAACCTGGCCGACAACGTGCAGAGCATCAGCACCGAGAATACCACCGCCGACGGCGATAATGCCGGCC										7800
	V L K D L F L E H A H N L A D N V Q S I S T E N T T A D G D N A G Q										
	117										

hCEBPg

	7810	7820	7830	7840	7850	7860	7870	7880	7890	7900	
	*	*	*	*	*	*	*	*	*	*	
7801	AATGAGCTAGCAAGGATCTGCGATCGCTCCGGTGCCTGAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTTCGGCAATT										7900

1

hCEBPg

EFla promoter

	7910	7920	7930	7940	7950	7960	7970	7980	7990	8000	
	*	*	*	*	*	*	*	*	*	*	
7901	GAACGGGTGCCTAGAGAAGGTGGCGGGGTAACTGGGAAAGTATGTCGTGACTGGCTCCGCCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAG										8000
	EFla promoter										

	8010	8020	8030	8040	8050	8060	8070	8080	8090	8100	
	*	*	*	*	*	*	*	*	*	*	
8001	TGCAGTAGTCGCGGTGAACGTTCTTTTCGCAACGGGTTTGGCCGACAGACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCCTTCACGCGCCCGCCG										8100
	EFla promoter										

	8110	8120	8130	8140	8150	8160	8170	8180	8190	8200	
	*	*	*	*	*	*	*	*	*	*	
8101	CCTACCTGAGCCGCCATCCACGCCGTTGAGTCGCGTCTGCGCCCTCCCGCCTGTGGTGCCTCCTGAAGTGCCTCCCGCTAGGTAAGTTTAAAGC										8200
	EFla promoter										

	8210	8220	8230	8240	8250	8260	8270	8280	8290	8300	
	*	*	*	*	*	*	*	*	*	*	
8201	TCAGGTCGAGACCGGGCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCCTGACCTGCTTGCTCAACTCTACGT										8300
	EFla promoter										

	8310	8320	8330	8340	8350	8360	8370	8380	8390	8400	
	*	*	*	*	*	*	*	*	*	*	
8301	CTTTGTTTCGTTTTCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCCTACGGATCCGCCGCCACCATGGGGATCGAGGGCAGAGGAAGTCTTC										8400
									E G R G S L L		
									1		
									T2A		
	EFla promoter										

	8410	8420	8430	8440	8450	8460	8470	8480	8490	8500	
	*	*	*	*	*	*	*	*	*	*	
8401	TAACATGCGGTGACGTGGAGGAGAATCCCGCCCTATGACCGAGTACAAGCCACGGTGCGCCCTCGCCACCCGCGACGAGTCCCGAGGGCCGTACGCAC										8500
	T C G D V E E N P G P M T E Y K P T V R L A T R D D V P R A V R T										
	8										
	1										
	T2A										
	Puro										

	8510	8520	8530	8540	8550	8560	8570	8580	8590	8600	
	*	*	*	*	*	*	*	*	*	*	
8501	CCTCGCCGCGGTTTCGCGACTACCCGCCACGCGCCACACCGTCGATCCGGACCCACATCGAGCGGGTCAACCAGGCTGCAAGAAGTCTTCTCACC										8600
	L A A A F A D Y P A T R H T V D P D R H I E R V T E L Q E L F L T										

