



[54] ELL2, A NEW MEMBER OF AN ELL FAMILY OF RNA POLYMERASE II ELONGATION FACTORS

[75] Inventors: D. Roxanne Duan, Bethesda, Md.; Ali Shilatifard, St. Louis, Mo.; Joan W. Conaway; Ronald C. Conway, both of Oklahoma City, Okla.

[73] Assignees: Human Genome Sciences, Inc., Rockville, Md.; Oklahoma Medical Research Foundation, Oklahoma City, Okla.

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Primary Examiner—John S. Brusca
Attorney, Agent, or Firm—Sterne, Kressler, Goldstein & Fox, p.l.l.c.

[57] ABSTRACT

ELL2 polypeptides and polynucleotides and methods for producing such polypeptides by recombinant techniques are disclosed. Also disclosed are methods for utilizing ELL2 polypeptides and polynucleotides in the design of protocols for the treatment of neoplastic disorders, among others and diagnostic assays for such conditions.

96 Claims, 7 Drawing Sheets

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1 CAGTGGCGGCGGGTGCAGAAGCCCAAGCAGCGCGGCCGCAGTGGAGGCTAGAGCCGGAGC 60  
-----+-----+-----+-----+-----+-----+-----+  
61 GGCGGCGGCGGCGGCACCCCGGGGAGGTTTAAGATGGCGGCGGGGGGACAGGGGGCCTG 120  
-----+-----+-----+-----+-----+-----+-----+  
M A A G G T G G L  
121 CGGGAGGAGCAGCGCTATGGGCTGTCGTGCGGACGGCTGGGGCAGGACAACATCACCGTA 180  
-----+-----+-----+-----+-----+-----+-----+  
R E E Q R Y G L S C G R L G Q D N I T V  
181 CTGCATGTGAAGCTCACCGAGACGGCGATCCGGGCGCTCGAGACTTACCAGAGCCACAAG 240  
-----+-----+-----+-----+-----+-----+-----+  
L H V K L T E T A I R A L E T Y Q S H K  
241 AATTTAATTCCTTTTCGACCTTCAATCCAGTTCCAAGGACTCCACGGGCTTGTCAAAT 300  
-----+-----+-----+-----+-----+-----+-----+  
N L I P F R P S I Q F Q G L H G L V K I  
301 CCCAAAATGATCCCCTCAATGAAGTTCATAACTTTAACTTTTATTTGTCAAATGTGGGC 360  
-----+-----+-----+-----+-----+-----+-----+  
P K N D P L N E V H N F N F Y L S N V G  
361 AAAGACAACCCTCAGGGCAGCTTTGACTGCATCCAGCAAACATTCTCCAGCTCTGGAGCC 420  
-----+-----+-----+-----+-----+-----+-----+  
K D N P Q G S F D C I Q Q T F S S S G A  
421 TCCAGCTCAATTGCCTGGGATTTATAACAAGATAAAATTACAGTGTGTGCAACAAACGAC 480  
-----+-----+-----+-----+-----+-----+-----+  
S Q L N C L G F I Q D K I T V C A T N D  
481 TCGTATCAGATGACACGAGAAAGAATGACCCAGGCAGAGGAGGAATCCCGCAACCGAAGC 540  
-----+-----+-----+-----+-----+-----+-----+  
S Y Q M T R E R M T Q A E E E S R N R S  
541 ACAAAAGTTATCAAACCCGGTGGACCATATGTAGGGAAAAGAGTGCAAATTCGGAAAGCA 600  
-----+-----+-----+-----+-----+-----+-----+  
T K V I K P G G P Y V G K R V Q I R K A  
601 CCTCAAGCTGTTTCAGATACAGTTCCTGAGAGGAAAAGGTCAACCCCATGAACCCTGCA 660  
-----+-----+-----+-----+-----+-----+-----+  
P Q A V S D T V P E R K R S T P M N P A  
661 AATACAATTCGAAAGACACATAGCAGCAGCACCATCTCTCAGAGGCCATACAGGGACAGG 720  
-----+-----+-----+-----+-----+-----+-----+  
N T I R K T H S S S T I S Q R P Y R D R  
721 GTGATTCACCTTACTGGCCCTGAAGGCTACAAGAAACCGGAGCTACTTGCTAGACTCCAG 780  
-----+-----+-----+-----+-----+-----+-----+  
V I H L L A L K A Y K K P E L L A R L Q

FIG. 1A

781 AAAGATGGTGTCAATCAAAAAGACAAGAACTCCCTGGGAGCAATTCTGCAACAGGTAGCC 840  
-----+-----+-----+-----+-----+-----+  
K D G V N Q K D K N S L G A I L Q Q V A  
841 AATCTGAATTCTAAGGACCTCTCATATACCTTAAAGGATTATGTTTTTAAAGAGCTTCAA 900  
-----+-----+-----+-----+-----+-----+  
N L N S K D L S Y T L K D Y V F K E L Q  
901 AGAGACTGGCCTGGATACAGTGAAATAGACAGACGGTCATTGGAGTCAGTGCTCTCTAGA 960  
-----+-----+-----+-----+-----+-----+  
R D W P G Y S E I D R R S L E S V L S R  
961 AAATAAATCCGTCTCAGAATGCTACAGGCACCAGCCGTTTCAAGATCTCCTGTATGTTCT 1020  
-----+-----+-----+-----+-----+-----+  
K L N P S Q N A T G T S R S E S P V C S  
1021 AGTAGAGATGCTGTATCTTCTCCTCAGAAAACGGCTTTTGGATTGAGAGTTTATTGATCCT 1080  
-----+-----+-----+-----+-----+-----+  
S R D A V S S P Q K R L L D S E F I D P  
1081 TTAATGAATAAAAAAGCCCCGAATATCTCACCTGACGAACAGAGTACCACCAACTAAAT 1140  
-----+-----+-----+-----+-----+-----+  
L M N K K A R I S H L T N R V P P T L N  
1141 GGTCAATTTGAATCCCACCAGTGAAAAATCGGCTGCAGGCCTCCCACTGCCCCCTGCGGCT 1200  
-----+-----+-----+-----+-----+-----+  
G H L N P T S E K S A A G L P L P P A A  
1201 GCTGCCATCCCCACCCCTCCACCGCTGCCTTCAACCTATCTGCCATCTCACATCCTCCT 1260  
-----+-----+-----+-----+-----+-----+  
A A I P T P P P L P S T Y L P I S H P P  
1261 CAGATTGTAATTCTAACTCCAACCTCCCCTAGCACTCCAGAAGGCCGGGGACTCAAGAC 1320  
-----+-----+-----+-----+-----+-----+  
Q I V N S N S N S P S T P E G R G T Q D  
1321 CTACCTGTTGACAGTTTTAGTCAAAACGATAGTATCTATGAGGACCAGCAAGACAAATAT 1380  
-----+-----+-----+-----+-----+-----+  
L P V D S F S Q N D S I Y E D Q Q D K Y  
1381 ACCTCTAGGACTTCTCTGGAAACCTTACCCCTGGTTCCGTTCTACTAAAGTGCCAAAG 1440  
-----+-----+-----+-----+-----+-----+  
T S R T S L E T L P P G S V L L K C P K  
1441 CCTATGGAAGAAAACCATTCAATGTCTCACAAAAAGTCCAAAAAGAAGTCTAAAAAACAT 1500  
-----+-----+-----+-----+-----+-----+  
P M E E N H S M S H K K S K K K S K K H  
1501 AAGGAAAAGGACCAAATAAAAAAGCACGACATTGAGACTATTGAGGAAAAGGAGGAAGAT 1560  
-----+-----+-----+-----+-----+-----+  
K E K D Q I K K H D I E T I E E K E E D  
1561 CTTAAGAGAGAAGAGGAAATTGCCAAGCTAAATAACTCCAGTCCAAATTCAGTGGAGGA 1620  
-----+-----+-----+-----+-----+-----+  
1620

FIG. 1B

L K R E E E I A K L N N S S P N S S G G  
 GTTAAAGAGGATTGCACTGCCTCCATGGAACCTTCAGCAATTGAACTCCCAGATTATTTG  
 1621 -----+-----+-----+-----+-----+-----+ 1680  
 V K E D C T A S M E P S A I E L P D Y L  
 ATAAAATATATCGCTATCGTCTCCTATGAGCAACGCCAGAATTATAAGGATGACTTCAAT  
 1681 -----+-----+-----+-----+-----+-----+ 1740  
 I K Y I A I V S Y E Q R Q N Y K D D F N  
 GCAGAGTATGATGAGTACAGAGCTTTGCATGCCAGGATGGAGACTGTAGCTAGAAGATTT  
 1741 -----+-----+-----+-----+-----+-----+ 1800  
 A E Y D E Y R A L H A R M E T V A R R F  
 ATCAAAGTAGATGCACAAAGAAAGCGCCTTTCTCCAGGCTCAAAGAGTATCAGAATGTT  
 1801 -----+-----+-----+-----+-----+-----+ 1860  
 I K L D A Q R K R L S P G S K E Y Q N V  
 CATGAAGAAGTCTTACAAGAATATCAGAAGATAAAGCAGTCTAGTCCCAATTACCATGAA  
 1861 -----+-----+-----+-----+-----+-----+ 1920  
 H E E V L Q E Y Q K I K Q S S P N Y H E  
 GAAAAATACAGATGTGAATATCTTCATAACAAGCTGGCTCACATCAAAGGCTAATAGGT  
 1921 -----+-----+-----+-----+-----+-----+ 1980  
 E K Y R C E Y L H N K L A H I K R L I G  
 GAATTTGACCAACAGCAAGCAGAGTCATGGTCCTAGAACTCTGCTTGGACCAGAAGATGT  
 1981 -----+-----+-----+-----+-----+-----+ 2040  
 E F D Q Q Q A E S W S \*  
 GAATAAACTTAAGCTTATTTATTTAAAATTCCAATGAGTTGCTCTAGATTCTAAAAAGG  
 2041 -----+-----+-----+-----+-----+-----+ 2100  
 TGAAACTTTGGCTGTTGAAAGTTTCAGTATTAGTAACT  
 2101 -----+-----+-----+-----+-----+ 2139

FIG. 1C

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