

Sequence analysis of a genomic clone encoding a Zc2 protein from *Zea mays* W64 A

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A genomic clone (p268c) coding for the 28 kD storage protein Zc2 from maize endosperm has been isolated and sequenced. Formerly known as 28 kD glutelin-2 protein in previous works (1, 2), the sequence of the cDNA and of another genomic clone has been published. In this record, we report 1120 bp corresponding to the far upstream sequence reaching 1709 nucleotides from the first codon. The coding region and the consensus TATA-box are underlined. We have done homology studies by comparison with the genomic clone of Zc1 (3). We have found several homologous regions in the 5' sequences, with 70% homology from -1 to -650 bp. Another short segment

of 34 bp is found around the -1005 position (80% homology). Studies concerning the role of such regions on gene regulation are being carried out.

REFERENCES

- Prat,S., Cortadas,J., Puigdomènech,P. and Palau,J. (1985) *Nucl. Acids Res.* **13**, 1493–1504.
- Boronat,A., Martínez,M.C., Reina,M., Puigdomènech,P. and Palau,J. (1986) *Plant Science* **47**, 95–102.
- Reina,M., Guillén,P., Ponte,I., Boronat,A. and Palau,J. (1990) *Nucl. Acids Res.* **18**, 6425.

AAGCTTACTGAAATGGAAGACGATCATAACGAAGGTACCGAAGCTATGTGCAGAGGAGCTTCGGCATGACAGCAGAAAGGGAAACCGAC	100
TTAAAGATGAAAAGCCAATCAGCCCTCAAAGATTACTATAGAGTTATTGATAAAAAGTAAGGGCATTAATGTAATTTATACGGACTGCGTCCCGTG	200
CCTATAAAATAGATGAACAGTATTCTATGATTGTCACGCTGACTTGGCATTGGTACACGCCCTAACCTTACTTCCCAAGCGAAGTACATTGTT	300
GTTGCGTTATATAAGCAAATAATGAAATGAAATTAAATGTTCAAAAGTAATCATATTATTTATGTGTGAATCTTCTTACTTTTCAATTGATTAT	400
GATTATGAAGGTATGACCTTCATAACCTCGTCCGAAATCCATTATATCAAAGGAAAATAATGCTCGAAGGACGAAGGATTGATATTAAACATT	500
ATGTTGCCCTGTTCTTAATTCTATGAAACAAGTCCCCAACACCAACTTTATCTTACTATATAAGCACCACTTCAACGATCGTCTCGTGT	600
CAATTATTAAAAAACTCCACATTCTCTTATAATCAACCCGACTCTTATAATCTCTCTTACTACTATAATAAGAGAGTTATGTACAAAATAAG	700
GTGAATTATGTATAAGTGTCTGACCTTGGTTGTCATATTACACACCACTTAATAGAAAACATATGTTTATAAAACAAAATTATCAT	800
ATATATATATATATATATATATATATATATAATATAATATAATAAACCGTAGCATGACAGGCAATGACTAGTGGCAACTTAATACCATGTGTGA	900
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AGAAGGAGATTAATCGATTTCTCAATCCCCTCGATCAGGTGCAAGGCAATAAGCTTAAATGTCACGGTATTGGTAAAGAACATCAAACAACTC	1100
GTAAAGCTCCAAGAAATTGTTGATCTTAAACACTCACAGAACATCAACCAAAATTGTCACGGTATTGGTAAAGAACATCAAACAACTC	1200
TCTGTGTGCAAGAACACGGTGAAGTCATGCCGAGATCATACTCATCTGATATACATGCTTACAGCTCACAGACATTACAAACAACTCATATTGATTA	1300
CAAAGATCGTTCATGAAAAATAAGGCCGGAACAGGACAAAAACCTTGAGCTGTAAAGTAAATTACAACAAAAAAAGCCATATGCAAGCTA	1400
AATCTAATTGTTTACGTAGATCAACACCTGAGAAGGCAACAAAACGTGGCCACGCAAGTACAGAATGATTCCAGATGAACCACATGACGTGTCAC	1500
GTAAAGAGAGTGACCGAGTCATATACATTGGCAAGAACCATGAAGCTGCCTACAGCGTCTCGTGGCATAAGAACACAAGAAATTGTTAATTATC	1600
AAAGCTATAAAATAACGCTCGCATGCCCTGTGCACTTCCATCACCAACTGGCTTACGACCATAGCTTATCTACTCCAGCGCAGAAAGAACCG	1700
ATCGACACCATGAGGGTGTGCTGCCCTCGCTCCTGGCTCGCTCGAGCGGCCACCTCCACGCTACAGCGCGCTGCCAGCAC	1800
<u>CGCGCCGGTICATCACCGCCGCCGGTGCATCTGCCACCTCCGGTCTACCTGCCACCTCCGGTGATCTCCACCGCGCCGTCACCTGCCGCCGGT</u>	1900
CCACCTGCCACCGCCGGTCCATGTGCCGCCGCCGGTTCATCTGCCGCCGCCACCATGCCACTACCCACTCAACCGCCCGGCTCAGCCTCATCCCCAG	2000
<u>CCACACCATGCCCTGCCAACAGCCCGCATCCAAGCCCGTGCACGCTGCCAGGGACCTGCCGGTGTGGCAGCACCCCCGATCTGGCCAGTGCCTCGAGT</u>	2100
<u>TTCTGAGGCATCAGTGCAGCCCGACGGCAGCCCTACTGCTCCGCTCAGTGCAGTCGTTGCCAGCAGCTAGTGTGGCAGCAGGCTAGGAGCC</u>	2200
<u>GCAGCAGCGTACCGAGCGATCTCGGCTTGGCTCTCCAGTCCATCTGCCAGCAGCGCCAAAGGGCCAGGTGCGGGGGCTGTTGGCCGCGCAGATA</u>	2300
<u>GGCCAGCAACTGACGGCGATGTGCCGCTTGCAAGCGCAGCTCCATGCCCTACGCTGCTGCCGGTGTCCCCACTGAAGAAACTATGTGCTGTAGT</u>	2400
ATAGCCCGTGGCTAGCTAGTAGTTGAGTCATTTAGCGCGATGATTGAGTAATATGTGTCACGCTCACCATGGGTGGCAGTGTCACTGAGCAATG	2500
ACCTGAATGAACAATTGAAATGAAAAGAAAAAGTATTGTCACCTTAAACGTTTAACCTTTAATAGGTTTACACAAATTATGTGTTTTC	2600
TATATATATCTAGATTGTTATCATCCATTGAGTATAGACAAAAAAATTATAAGAAACTAAACGAATACTAATTGAAATAAGGGGTATATATTG	2700
GGATAATGTCATGAGATCCCTCGTAATATCACTGACATCACACGTGTCAGTACTGATACATGTTACATTTGTCAGTGTGAGCAATAC	2800
AATTGTCAGACTATCAGAAAGTCAACGAAAGTGAGTCAGTCAACACGGTGTGGATGAGGCGTTAGGCCACCTTATGGCAGAAAGATATC	2900
CACAATTGCTGGTTATATATACGTTGCGCTGCTATGTCCTCGCCTCCCTAGTTAAAGACTTGAAGCTAAGCT	2975

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