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Complete nucleotide sequence and exon–intron boundaries of the 5′ non-coding region of the mouse N-myc gene

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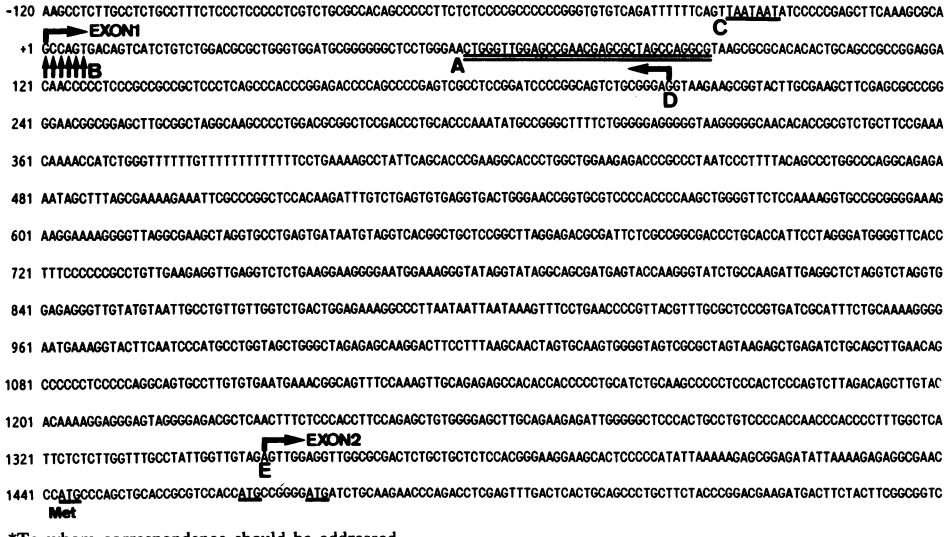
Isolation of mouse N-myc genomic clones and nucleotide sequence of the putative coding regions and the 3' non-coding region has been reported (1,2). The organization of the gene was suggested from homologies to human N-myc sequences (3,4); it presumably consists of three exons, the first of which is not protein-coding. However, no sequence data has been available for transcripts. In addition, the region between the transcriptional initiation site and the second exon has not been completely sequenced. We isolated cDNA clones from mouse cell line PSA5-E (5), and compared the nucleotide sequences with that of a genomic clone which we determined by a chain termination method (6): i) Exon I was found to contain a segment of 33 bp (A) missing from the previously reported sequence (1), thereby placing the transcriptional initiation sites (B) approx. 30 bp downstream of a TATA box (C). ii) The nucleotide sequence of the first intron was determined, and the boundaries of the first intron (D and E) were defined at the sites different from those previously suggested (1,2). iii) Boundaries of the second intron and the polyA addition site were confirmed. For the nucleotide sequence 3' of that shown in the Figure, see Ref. 2.



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