Polymerase chain reaction and DNA sequence of rainbow trout tumour suppressor gene

A protocol for the extraction of genomic DNA from teleost fish was developed and produced high molecular weight DNA from English sole, white sucker and rainbow trout. A protocol for polymerase chain reaction (PCR) of tumour suppressor gene p53 from rainbow trout genomic DNA was developed. Several primers were chosen inside exon 5 and 9 and exon 6 and 7. A successful PCR method yielded the conserved exon 5 to 9 region of genomic rainbow trout p53 in two fragments: fragment 1 comprising exons 5 and 6 and fragment 2 spanning the region of exons 7 to 9. The apparent molecular weight of fragments 1 and 2 were 510 and 760 base pairs respectively. The sequences of both fragments including the introns were determined and gave 515 and 793 bp for the two PCR fragments. These sequences will facilitate examination of tumour suppressor gene p53 conserved exons from genomic DNA e.g. for study of p53 mutations in fish.

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Obtenir le document : EDP Sciences
Mots clés : polymerase chain reaction, tumour suppressor gene, DNA, ADN, gène, génome, mutation, tumeur, poisson téléostéen, truite
Thème (issu du Text Mining) : POLLUANTS
Date : 1994-01-15
Format : text/xml
Source : https://doi.org/10.1051/alr:1994002
Langue : Anglais
Télécharger les documents : https://www.alr-journal.org/10.1051/alr:1994002/pdf