Nucleotide sequence of a cDNA encoding Wnt-1 of the Mexican axolotl Ambystoma mexicanum

Ursula Busse, Johane Guay and Carl Séguin*
Centre de Recherche en Cancérologie de l'Université Laval, L'Hôtel-Dieu de Québec, 11 côte du Palais, Québec G1R 2J6 and Département de Physiologie, Faculté de Médecine, Université Laval, Québec G1K 7P4, Canada

Submitted October 31, 1990

Wnt-1 (int-1, wingless) is a proto-oncogene first identified in mammary gland tumors due to its inappropriate expression after activation by the mouse mammary tumor virus (1). A cDNA coding for the Mexican axolotl (Ambystoma mexicanum) Wnt-1 (AWnt-1) was found by screening a stage 18-embryo cDNA library with a 200 bp fragment of the axolotl Wnt-1 obtained by polymerase chain reaction (PCR) amplification. The axolotl Wnt-1 is rich in cysteine residues and has four possible sites for N-linked glycosylation (bold underlined). Comparison of the predicted amino acid sequences of the axolotl, mouse (2), Xenopus (3) and Drosophila (4) Wnt-1 proteins showed that AWnt-1 is 78% identical to the mouse protein, 76% to Xenopus and 56% to Drosophila.

ACKNOWLEDGEMENTS

We thank L. Larouche for expert technical assistance and are grateful to T. Moss for providing the oligodeoxynucleotides used in the PCR reactions. This work was supported by grants MA-9821 and MT-10671 from the Medical Research Council of Canada (MRC) and a grant from the Spina Bifida Association of Canada. UB and JG are supported by Studentships from the Deutscher Akademischer Austauschdienst and the Fond de la Recherche en Santé du Québec and CS by a Scholarship from the MRC.

REFERENCES


*To whom correspondence should be addressed