

# A Protein from the Salivary Glands of the Giant Amazon Leech with High Sequence Homology to a Nicotinic Acetylcholine Receptor Subunit §

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*Haementeria ghilianii*, RACE-PCR, Nicotinic Acetylcholine Receptor

A gene coding for a soluble protein with homology to the  $\beta$  subunit of the nicotinic acetylcholine receptor from goldfish was isolated from a cDNA library of *Haementeria ghilianii* salivary glands. Comparison of the leech protein sequence with the database showed that the N terminus has high homology with the extracellular portion of acetylcholine receptor  $\beta$  subunits, whilst the C terminus, highly charged, has homology to proteins which may be involved in chelating divalent cations. The leech protein was expressed in mammalian cells and the product compared to the native protein. Both proteins are glycosylated and form polymers which are disrupted by heat but not by reducing agents. A role for this protein in salivary gland secretion is suggested.