cDNA sequence of salmon melanin-concentrating hormone exhibits similarities with 7SL RNA

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FIGURE LEGEND AND COMMENTS: Partial alignment of salmon melanin-concentrating hormone (MCH) cDNA and human 7SL DNA sequences: Upper line = salmon MCH cDNA sequence (SAL MCH) (Nahon et. al. in preparation); lower line = human 7SL DNA sequence (HUM 7SL) (1). Computer search for homology between salmon MCH cDNA sequence and human (or rat) DNA sequences demonstrate 52% nucleotide identities between the central domain from nucleotide +256 to +399, of the salmon MCH RNA and the human (and rat) 7SL RNA sequence (1). There is even a 76% nucleotide identity between sequence corresponding to the common region of oligonucleotides, SMCH-1, SMCH-5 and SMCH-8 overlapping the MCH peptide sequence (2), and the human (and rat) 7SL RNA (Boxed in Fig.). It is noteworthy that these sequence identities were observed mostly in the coding region of the MCH mRNA. Although similarities between MCH mRNA and 7SL RNA might reflect only common ancestry with no current functional significance, we are exploring the possibility that MCH mRNA might play an analogous role to that of 7SL RNA (3) in targeting the MCH precursor to the endoplasmic reticulum.

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