# Cloning of cDNA encoding the complete precursor for bovine seminal ribonuclease

Klaus-Dieter Preuß, Sabine Wagner, Johannes Freudenstein and Karl Heinz Scheit*

Max-Planck-Institut für biophysikalische Chemie, Department of Molecular Biology, 3400 Göttingen, FRG

Palmieri *et al.* (1) cloned and sequenced a cDNA fragment encoding bovine seminal ribonuclease (RNase BS1) from amino acid residue 47 up to the C-terminal residue. The characterized clone p17G3 in addition to the partial coding sequence contained the complete 3'-untranslated region. On screening a cDNA library from bovine seminal vesicle tissue by colony hybridisation employing synthetic primers a number of RNase BS1-specific clones were identified. cDNA clone pBSV5 displays an open reading frame encoding a hydrophobic leader peptide consisting of 26 aa and the mature RNase BS1 of 124 aa. pBSV5 comprises the full 3'-untranslated region. The DNA sequence of pBSV5 from position 240−808 differs from the reported sequence (1)

in positions 621 and 647 within the 3'-untranslated region. A surprisingly high degree of identity (92%) was found between the signal peptides of RNase BS1 and bovine pancreatic ribonuclease (2).

## REFERENCES

1. M.Palmieri, A.Carsana, A.Furia and M.Libonati (1985) *Eur. J. Biochem.* **125**, 275−277.
2. A.Carsana, F.Confalone, M.Palmieri, M.Libonati and A.Furia (1988) *Nucl. Acids Res.* **16**, 5491−5502.

```
                                                                                                                                120
TCCTCCAGTGGAGTGAGGTCATCATGGCTCTGAAGTCTCTAGTCGTGTTGCCACTGCTGGTCCTGGTGCTGCTGCTGGTGCGGGTCCAGCCTTCCCTGGGCAAGGAATCTGCAGCTGCCA
                  M  A  L  K  S  L  V  V  L  P  L  L  V  L  V  L  L  L  V  R  V  Q  P  S  L  G  K  E  S  A  A  A  K
                                                                                                          -1 +1              240
AGTTCGAGCGGCAGCACATGGACTCTGGCAACTCCCCCAGCAGCAGCTCCAACTACTGCAACCTGATGATGTGCTGCCGGAAGATGACCCAGGGGAAATGCAAGCCAGTGAACACCTTTG
   F  E  R  Q  H  M  D  S  G  N  S  P  S  S  S  S  N  Y  C  N  L  M  M  C  C  R  K  M  T  Q  G  K  C  K  P  V  N  T  F  V
                                                                                                                           360
TGCATGAGTCCCTGGCCGATGTTAAGGCCGTGTGCTCCCAGAAGAAAGTCACTTGCAAGAATGGGCAGACCAACTGCTACCAGAGCAAATCCACCATGCGCATCACAGACTGCCGCGAGA
   H  E  S  L  A  D  V  K  A  V  C  S  Q  K  K  V  T  C  K  N  G  Q  T  N  C  Y  Q  S  K  S  T  M  R  I  T  D  C  R  E  T
                                                                                                                           480
CTGGCAGCTCCAAGTACCCCAACTGCGCCTACAAGACCACCCAGGTGGAGAAACACATCATAGTGGCTTGTGGCGGTAAACCGTCCGTGCCAGTCCACTTCGATGCTTCAGTGTAGATCT
   G  S  S  K  Y  P  N  C  A  Y  K  T  T  Q  V  E  K  H  I  I  V  A  C  G  G  K  P  S  V  P  V  H  F  D  A  S  V  *
                                                                                                                           600
CCACCTGAGGCCAGAACAGTGAGATGCACCGCTTCATCACAAAGGCATCTGCCTCTCCCTCTTGTTTCCTTACCCTGAGGGCAATAACTCAAGTTAGTTAAGGTTTTTATCCCTGCAACC
                                                                                                                           720
CCCACCACACACACCCACCCCCCACACACACACCCATGTTTCCCTGGCATGAGGGCAATAACTCAAGCTAGTTAGGGCTCTTATCCAACATACACATGCTCCCCTGGCCTGAGGCTTGCCC
                                                                                                     808
CTGTGTAGTTTGGGAATTGAGAAGTGGGTTGTAATATGGGACCCATGTTAACCTAATCACTGCTACTTTCAATAAAACACACTTGCAA
```

---

* To whom correspondence should be addressed