

Nucleotide sequence of a gene encoding a histone-like protein in the archaeon *Methanococcus voltae*

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Received February 4, 1993; Accepted February 11, 1993

EMBL accession no. X69792

We have detected in *Methanococcus voltae* a gene which encodes a histone-like protein. Because of the similarity of the polypeptide sequence to that of the previously described *hmfB* gene product of *Methanothermobacter ferredoxigenes* (1) we call the gene *hmvA*. The protein has significant homology to eukaryotic histones A2 and A3. The degree of similarity between the two archaeal gene products is shown in Figure 1. They differ in the length of their C-termini, which might indicate that the HMV-protein interacts with factor types not recognized by the HMf protein. No sequence similarities of the *hmvA*-product were detected with the MC1 protein of *Methanosarcina barkeri* (2) nor with the basic *Escherichia coli* proteins HU1 (3), HU2 (4) or H-NS (5).

ACKNOWLEDGEMENT

This work was supported by the Deutsche Forschungsgemeinschaft.

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HMV MIPKGTVKRIMKDNTMTEMVSTESVVALVDILQEM
      :| : : || : :
HMf MELPIAPIGRRIKDAGAERVSDDARITLAKILEEM

HMV IVTTTKIAEENAAKDKRRTIKARDIECDAERLKEK
      :
HMf GRDIASEAIKLARHAGRRTIKAEDIEELAVRRFKK

HMV ILQVSERTEKVNMLANEILHVIASELERY

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Figure 1. Sequence alignment of the histone-like proteins HMV and Hmf. Vertical bars show identical amino acids in homologous positions. Colons indicate conservative exchanges.

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