

## Characterisation of the 11Kb DNA region adjacent to the gene encoding *Desulfovibrio gigas* flavoredoxin



**Author(s):** Broco M, Marques A, Oliveira S, Rodrigues-Pousada C

**Source:** DNA SEQUENCE **Volume:** 16 **Issue:** 3 **Pages:** 207-216 **Published:** JUN 2005

**Times Cited:** 2 **References:** 41  [Citation Map](#) *beta*

**Abstract:** Flavoredoxin is an FMN binding protein that functions as an electron carrier in the sulphate metabolism of *Desulfovibrio gigas*. The neighbouring DNA regions of the gene encoding flavoredoxin were sequenced and characterised. Transcript analysis of the flavoredoxin gene resulted in a positive band corresponding to the size of the coding region, suggesting that flavoredoxin is encoded by a monocistronic unit, as previously suggested by sequence analysis.

Analysis of the adjacent DNA regions revealed several interesting genes. The sequenced DNA regions contain nine open reading frames (ORFs) organised in two polycistronic and two monocistronic units. These genes encode proteins involved in different metabolic pathways, namely in DNA methylation, tRNA and rRNA modification, mRNA metabolism, cell division, CoA synthesis and lipoprotein transport across the membrane.

**Document Type:** Article

**Language:** English

**Author Keywords:** *Desulfovibrio gigas*; flavoredoxin; monocistronic; flanking regions

**KeyWords Plus:** TRANSFER-RNA MODIFICATION; ESCHERICHIA-COLI; SEQUENCE ALIGNMENT; SHIGELLA-FLEXNERI; MIAA GENE; PROTEIN; EXPRESSION; FTSK; ADENYLYLTRANSFERASE; METHYLTRANSFERASES

**Reprint Address:** Rodrigues-Pousada, C (reprint author), Univ Nova Lisboa, Inst Tecnol Quim & Biol, P-2780 Oeiras, Portugal

**Addresses:**

1. Univ Nova Lisboa, Inst Tecnol Quim & Biol, P-2784505 Oeiras, Portugal
2. Univ Evora, Dept Biol, P-7002554 Evora, Portugal

**E-mail Addresses:** [claudina@itqb.unl.pt](mailto:claudina@itqb.unl.pt)