Bacillus cereus strain SE-1: nucleotide sequence of the sphingomyelinase C gene

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The genes encoding two different phospholipase C exoenzymes of Bacillus cereus are directly linked. A sequence comprising the gene for phospholipase C and part of the sphingomyelinase C (SMase) gene from strain SE-1 (1) as well as the entire SMase gene sequence from strain IAM 1208 (2) have recently been determined. We now report the complete sequence of the SMase gene from strain SE-1. Surprisingly, 27 amino acid (aa) changes were found when the derived aa sequences of the SMase genes of the two strains were compared. The nucleotide sequences of the SMase gene and a possible downstream gene (start codon boxed) differ by 9.9%. The aa changes are indicated in the figure with the corresponding aa of the IAM 1208 SMase shown above the SE-1 sequence. The putative SD sequences of the SMase gene and a possible downstream gene (start codon boxed) are underlined. The vertical arrow indicates the junction between the putative signal peptide and the mature exoenzyme (2). A possible Rho-independent terminator is indicated by horizontal arrows above the sequence. The DNA sequence is numbered to match the previously published sequence (1) and the database entry.

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