A draft genome sequence of *Streptomyces incanatus* NRRL8089, which produces the nucleoside antibiotic sinefungin, is described here. The genome contains 8,897,465 bp in 76 contigs and 8,266 predicted genes. Interestingly, the genome encodes an open reading frame for selenocysteine-containing formate dehydrogenase-O and the selenoprotein biosynthetic gene cluster selABCD.

**Nucleotide sequence accession numbers.** The sequences obtained by this whole-genome shotgun project have been deposited in DDBJ/EMBL/GenBank under the accession numbers CP011497, CP011498, CP011499, and CP011500. 

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**REFERENCES**

