

The expression of genes involved in microcin maturation regulates the production of active microcin E492

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The production of active microcin E492, a channel-forming bacteriocin, was studied in exponential and stationary phase. The structural gene for this bacteriocin (*mceA*) is transcribed in exponential as well as in stationary phase, but the active form is produced only during the exponential phase of growth. An inactive form of microcin E492 was purified from the stationary phase. The production of the inactive form correlated with the lack of transcription in the stationary phase of two genes (*mceI*, *mceJ*) involved in microcin E492 maturation, consequently behaving as the inactive form purified from mutants in these genes. The inactive form of microcin purified from the stationary phase as well as the inactive form purified from mutants in the maturation genes (*mceC*, *I*, *J*) were unable to compete with the active form when tested using a viability test on sensitive cells. This result strongly suggests that the inactive form of microcin caused by the lack of expression of the maturation genes is