

## **AnkB, an Ankyrin-like Protein, Is Required for the Expression of CuZnSOD Activity in *Vibrio vulnificus***

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The CuZnSOD, copper- and zinc-containing superoxide dismutase encoded within *sodC*, located at the periplasm of *Vibrio vulnificus*, which has FeSOD and MnSOD as cytoplasmic enzymes. AnkB, an ankyrin-like protein, was found at the upstream of *sodC*. The two genes are transcriptionally linked, and the *sodC* gene appears to have an internal promoter at the intercistronic region. The operon transcription was elevated at the early stationary phase of cell growth, whereas the *sodC* transcription by internal promoter was only observed during exponential growth. The physiological role of AnkB in the expression of CuZnSOD was examined. The CuZnSOD activity of *ankB*-interrupted cell was not detected but it was complemented with DNA containing *ankB*. AnkB and SodC were purified using an *Escherichia coli* expression system. The CuZnSOD activity of the purified SodC was not observed. However, it was detected in the presence of the purified AnkB. AnkB appeared to increase dimeric assembly of SodC, monitored through a gel filtration assay. So, we propose that AnkB as chaperone is necessary for the expression and dimerization of CuZnSOD in periplasm.