

Functional Expression of Chicken Sonic Hedgehog  
Amino Terminal in *Escherichia coli*

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The chicken sonic hedgehog cDNA (*Shh*) was cloned and an amino-terminal domain of its protein (SHH-N) was expressed in *E. coli*. The full-length *Shh* cDNA was inserted into a pCR2.1 vector and subcloned into pCDNA3.1(-), a mammalian expression vector. The conjugate of the Histidine Hexamer and full length SHH was identified. The 5' truncated coding region was amplified by PCR and cloned into the pBAD-TOPO vector which had C-terminal 6xHistidine tagging system. SHH and Histidine conjugate was obtained using charged Ni<sup>2+</sup> ion containing chelating columns. The 20kDa single band was observed on the coomassie blue stained SDS-PAGE gel and immunoreactivity was confirmed using SHH-N monoclonal antibody.

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