

Compositions and methods for conferring pesticidal activity to bacteria, plants, plant cells, tissues and seeds are provided. The toxin coding sequences can be used in DNA constructs or expression cassettes for expression in plants and bacteria. Compositions also include transformed bacteria, plants, plant cells, tissues, and seeds. In particular, polynucleotide sequences and the toxin proteins encoded thereby are provided. Also provided are antibodies specifically binding to those amino acid sequences. In particular, the invention encompasses nucleotide sequences encoding fusion proteins, as well as biologically active variants and fragments thereof, wherein the fusion protein contains the C-terminal portion of SEQ ID NO:43. The fusion protein may also contain the N-terminal portion of SEQ ID NO:45. The invention also includes the nucleotide sequence of SEQ ID NO:47 and 1-14, or a nucleotide sequence encoding the amino acid sequence set forth in SEQ ID NO:48 and 15-31, including biologically active variants and fragments thereof.