Cloning and sequence analysis of the LOC339524 gene in Sprague-Dawley rats

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ABSTRACT. We cloned the LOC339524 gene in Sprague-Dawley (SD) rats and analyzed the structure and function of the protein encoded by it. Based on the known human LOC339524 gene sequences, the full-length coding sequence of the LOC339524 gene in SD rats was cloned and amplified by the polymerase chain reaction using the complementary DNA of SD rats as a template. Bioinformatics analysis showed that the length of the cloned LOC339524 gene (GenBank accession No. KM224520) was 831 bp and it encoded a deduced protein of 276 amino acids. Sequence analysis revealed that the coded protein was identical to that produced in humans and its functional domain was located in the 138-236 amino acid fragments, a proline-rich region. Our results suggest that the encoded protein may be a significant regulator of the inflammatory response and may provide sufficient information to justify an in-depth investigation of the role of the LOC339524 gene.

Key words: Sprague-Dawley rat (*Rattus norvegicus*); LOC339524 gene; Clone; Bioinformatics

