

ABSTRACT

The present application relates to the fields of gene therapy and molecular biology. More specifically, the present invention relates to an isolated modified capsid protein VP1 from adeno-associated virus serotype 5 (AAV5), comprising one or more amino acid substitutions compared to the wild-type AAV5 capsid protein VP1, which substitutions increase the efficiency of transduction, increase the efficiency of packaging of AAV viral genomes with rAAV5-based products, and also increase the efficiency of production (assembly) of a vector based on recombinant adeno-associated virus serotype 5 (rAAV5), to a capsid and a vector based on the above VP1, as well as to uses thereof.