

NO 10, in an effective immunogenic amount in a pharmaceutically acceptable carrier and/or adjuvant.

34. A vaccine against ESB infection comprising of a nucleotide sequence selected from a group consisting of: SEQ ID NO 11 and SEQ ID NO 12, in an effective immunogenic amount in a pharmaceutically acceptable carrier and/or adjuvant.

35. A recombinant DNA construct comprising: (i) a vector, and (ii) at least one of the ESB virus DNA sequences selected from a group consisting of SEQ ID NO 1, SEQ ID NO 3, SEQ ID NO 5, SEQ ID NO 7, SEQ ID NO 9, SEQ ID NO 11 and SEQ ID NO 12.

36. A self-replicating RNA produced from the construct of claim **35**.

37. An infectious alphavirus particle produced from packaging the self-replicating RNA of claim **36**.

38. A pharmaceutical composition comprising the infectious alphavirus particles according to claim **37** in an effective immunogenic amount in a pharmaceutically acceptable carrier and/or adjuvant.

39. A host cell transformed with a recombinant DNA construct according to claim **35**.

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