

-continued

---

```

<212> TYPE: PRT
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: Synthetic

<400> SEQUENCE: 30

```

```

Asp Tyr Lys Asp Asp Asp Lys Gly
1           5

```

---

**1.** A polypeptide comprising the amino acid sequence of the ectodomain of Lassa virus (LASV) glycoprotein 1 (GP1), or a fragment, analog or homolog thereof, in fusion with a non-LASV polypeptide, wherein said polypeptide excludes other LASV peptide sequences.

**2.** The polypeptide of claim **1**, wherein said polypeptide is a glycoprotein and said fusion is with a signal peptide.

**3.** The polypeptide of claim **2**, wherein said ectodomain comprises amino acid residues 59-259 of the LASV glycoprotein precursor (GPC).

**4.** The polypeptide of claim **2**, wherein said signal peptide is a human IgG  $\lambda$  light chain (h  $\lambda$ LC) signal peptide or a human IgG heavy chain (h HC) signal peptide.

**5-7.** (canceled)

**8.** The polypeptide of claim **1**, wherein said fusion is with an *Escherichia coli* maltose-binding protein or the Flag-tag sequence (DYKDDDDKKG).

**9-10.** (canceled)

**11.** A nucleic acid molecule that contains a sequence encoding the polypeptide of claim **1**.

**12-18.** (canceled)

**19.** The nucleic acid molecule of claim **11**, wherein said nucleic acid molecule is an expression vector.

**20-26.** (canceled)

**27.** An antibody raised against the polypeptide of claim **1**.

**28-53.** (canceled)

**54.** The polypeptide of claim **1**, wherein said polypeptide is a membrane-anchored form of glycoprotein 1 (GP1).

**55.** The polypeptide of claim **54**, comprising amino acid residues 1-259 and 428-451 of the Lassa virus (LASV) glycoprotein precursor (GPC).

**56-88.** (canceled)

**89.** The composition of claim **91**, wherein said composition is in the form of a vaccine for preventing or treating infection of a patient by Lassa virus.

**90.** (canceled)

**91.** A pharmaceutical composition comprising a polypeptide according to claim **1** and a pharmaceutically acceptable carrier.

**92-94.** (canceled)

**95.** A diagnostic kit for detecting an infection of a subject by Lassa virus or other arenaviridae comprising a polypeptide according to claim **1**.

**96.** (canceled)

**97.** A method of detecting infection by a Lassa virus or other arenaviridae comprising detecting Lassa virus or other arenaviridae antigens, or antibodies to Lassa virus or other arenaviridae, in a sample obtained from a subject suspected of being infected, wherein said antigens or antibodies are detected using a polypeptide according to claim **1**.

**98.** A method of treating or preventing infection by Lassa virus or other arenaviridae in a subject comprising administering a polypeptide according to claim **1** to said subject.

**99-100.** (canceled)

**101.** A method for producing a polypeptide according to claim **1**, wherein the method comprises the step of expressing said polypeptide in a cell.

**102.** The method of claim **101**, wherein said cell is an *Escherichia coli* cell.

**103.** The method of claim **102**, wherein the polypeptide is expressed in the cytoplasm of said *Escherichia coli* cell.

**104.** The method of claim **103**, wherein the polypeptide is expressed in an *Escherichia coli* Rosetta gami 2 cell.

\* \* \* \* \*