Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu or a salt thereof.

(21) An aspect of the present invention is also a method for improving brain function, the method comprising administering to a non-human animal Pro-Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu or a salt thereof.

(22) An aspect of the present invention is also a method for improving brain function, the method comprising administering to a non-human animal Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu or a salt thereof.

(23) An aspect of the present invention is also a method for improving brain function, the method comprising administering to a non-human animal Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu or a salt thereof.

(24) An aspect of the present invention is also a method for improving brain function, the method comprising administering to a non-human animal Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu or a salt thereof.

(25) An aspect of the present invention is also the method described in any one of (14) to (24), in which the administering is oral administration.

(26) Especially, an aspect of the present invention is also the method described in any one of (14) to (25), in which the improving brain function is preventing amnesia or strengthening memory.

In another aspect of the present disclosure, there is provided a polypeptide for improving brain function consisting of the amino acid sequence of X-Pro-Pro-Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu-Y or a salt thereof, wherein i) X is Asn-Ile and Y is absent or represents Val-Met or ii) X is absent or represents Ile and Y is absent.

In another aspect of the present disclosure, there is provided a polypeptide for improving brain function consisting of the amino acid sequence of Asn-Ile-Pro-Pro-Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu (SEQ I.D. No:3) or a salt thereof.

In another aspect of the present disclosure, there is provided a polypeptide for improving brain function consisting of the amino acid sequence of Asn-Ile-Pro-Pro-Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu-Val-Met (SEQ ID NO:6) or a salt thereof.

In another aspect of the present disclosure, there is provided a polypeptide for improving brain function consisting of the amino acid sequence of Pro-Pro-Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu (SEQ ID NO: 1) or a salt thereof.

In another aspect of the present disclosure, there is provided a polypeptide for improving brain function consisting of the amino acid sequence of Ile-Pro-Pro-Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu (SEQ ID NO:2) or a salt thereof.

In another aspect of the present disclosure, there is provided a polypeptide for improving brain function consisting of the amino acid sequence of X-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu or a salt thereof, wherein X is absent or Leu-Thr-Gln-Thr-Pro or Pro.

In another aspect of the present disclosure, there is provided a polypeptide for improving brain function consisting of the amino acid sequence of Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu (SEQ ID NO:9) or a salt thereof.

In another aspect of the present disclosure, there is provided a polypeptide for improving brain function consisting of the amino acid sequence of Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu (SEQ ID NO:10) or a salt thereof.

In another aspect of the present disclosure, there is provided the use of a polypeptide consisting of the amino acid sequence selected from the group consisting of X-Pro-Pro-Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu-Y or a salt thereof, wherein i) X is Asn-Ile and Y is absent or represents Val-Met or ii) X is absent or represents Ile and Y is absent, Asn-Ile-Pro-Pro-Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-

Glu (SEQ I.D. No:3) or a salt thereof,
Asn-Ile-Pro-Pro-Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu-Val-Met (SEQ ID NO:6) or a salt thereof,
Pro-Pro-Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu (SEQ ID NO: 1) or a salt thereof,
Ile-Pro-Pro-Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu (SEQ ID NO:2) or a salt thereof,
X-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu or a salt thereof, wherein X is absent or Leu-Thr-Gln-Thr-Pro or Pro,
Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu (SEQ ID NO:9) or a salt thereof,
Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu (SEQ ID NO:10) or a salt thereof, and
Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu (SEQ ID NO:11) or a salt thereof
in the manufacture of a medicament for improving brain function.

In another aspect of the present disclosure, there is provided the use of a composition comprising as an active ingredient, Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu or a salt thereof in the manufacture of a medicament for improving brain function.

In another aspect of the present disclosure, there is provided the use of a composition comprising as an active ingredient, Pro-Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu or a salt thereof in the manufacture of a medicament for improving brain function.

Brief Description of Drawings

Fig. 1 shows a prophylactic effect of a peptide Asn-Ile-Pro-Pro-Leu-Thr-Gln-Thr-Pro-Val-Val-Val-Pro-Pro-Phe-Leu-Gln-Pro-Glu (NIPPLTQTPVVVPPFLQPE) against scopolamine-induced amnesia. Water (control), scopolamine alone, or 0.05 nmol/kg weight, 0.5 nmol/kg weight, 1.5 nmol/kg weight, 5 nmol/kg weight, 50 nmol/kg weight, or 500 nmol/kg weight of NIPPLTQTPVVVPPFLQPE together with scopolamine was administered to mice, and their respective prophylactic effects against amnesia were evaluated in accordance with a method described in Example 1. The vertical axis in Fig. 1 shows the percentage of spontaneous alternation behavior. The percentage of