[ABSTRACT]

The present invention relates to an insulinotropic peptide derivative with a modified N-terminal charge and a pharmaceutical composition including the same. Specifically, the insulinotropic peptide derivative is characterized in that the N-terminal positive charge of the insulinotropic peptide is modified to a neutral or net negative charge at neutral pH. The insulinotropic peptide derivative according to the present invention is rapidly dissociated from the GLP-1 receptor owing to the above modification in the N-terminal charge, and exhibits enhanced insulinotropic ability and blood glucose-lowering activity compared to the native insulinotropic peptide while maintaining its stability in blood. Accordingly, the insulinotropic peptide derivative of the present invention is very useful for the treatment of type 2 diabetes.