

## **SYNTHETIC OPLOPHORUS LUCIFERASES WITH ENHANCED LIGHT OUTPUT**

### **Abstract**

A polynucleotide encoding a modified luciferase polypeptide. The modified luciferase polypeptide has at least 60% amino acid sequence identity to a wild-type Oplophorus luciferase and includes at least one amino acid substitution at a position corresponding to an amino acid in a wild-type Oplophorus luciferase of SEQ ID NO: 1. The modified luciferase polypeptide has at least one of enhanced luminescence, enhanced signal stability, and enhanced protein stability relative to the wild-type Oplophorus luciferase.

Fig. 8