

Abstract

OPLOPHORUS-DERIVED LUCIFERASES, NOVEL COELENTERAZINE SUBSTRATES, AND METHODS OF USE

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

Fig. 1