### **Modified Luciferins**

#### **Products Information**

Analogs and mofied Luciferin (see also Luciferin FT-27060A)

<b>D-Luciferin-6-O-β-D- galactopyranoside</b> FP-CQ6410 <sup>(M)</sup> CAS: 131474-38-9 <b>D-Luciferin, Phosphate</b> FP-DT244A, ,1mg CAS: 145613-12-3 MW: 426.25 A/E: 328 / 533 Soluble in Water	D-Luciferin phosphate is a highly sensitive bioluminescent substrate for detecting alkaline phosphatases and protein phosphatases by luminometric detection. It is used in combination with luciferase/ATP system. D-Luciferin phosphatases (such as alkaline phosphatases, acid phosphatases and protein phosphatases) that gives luminescence in the presence of luciferase and its cofactors. Our Amplite luciferase assay kit can be used for detecting D-luciferin release from D-Luciferin phosphate ses.
•Amino Luciferins <b>6-Amino-D-luciferin</b> 6-Amino-6-deoxyluciferin FP-JQ6990 <sup>(M)</sup> CAS: 118969-27-0 MW : 279.34	$\begin{array}{c} \hline H_{2N} & \hline H_$
N-CBZ- $\beta$ -glycinyl-6- aminoluciferin FP-LV6220 <sup>(x)</sup> CAS: 1233518-28-9 MW: 470.53 Soluble in H2O (pH > 8), DMSO	
6-FMOC-Amino-D-luciferin FP-EZD550 <sup>(X)</sup> CAS: 578705-74-2 MW :501.59	
Benzoyl-Leu-Gly-Arg- Aminoluciferin FP-GDA700, 1mg <sup>(M)</sup> CAS:73918-26-0 MW: 823.86 Soluble in DMSO A/E: none/560nm	a luminogenic substrate for complement component C3/C5 convertases, coagulation factor Xa, and soybean trypsin-like enzyme. It is also hydrolyzed by macropain, a high molecular weight thiol proteinase from human erythrocytes. The protease- released D-aminoluciferin can be detected using our luciferase assay kits. It is much more sensitive than Boc-Leu-Gly-Arg-AMC, the widely used fluorogenic AMC substrate. Harwood KR et al(2011) Identification of mutant firefly luciferases that efficiently utilize aminoluciferins. Chem Biol, 18, 1649. Takakura H et al (2011) Aminoluciferins as functional bioluminogenic substrates of firefly luciferase. Chem Asian J, 6, 1800.

•Inhibited luciferins/IIr substrates

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FT- JQ6990	
D-Luciferin, ethyl ester FP-CF4421, 10 mg CAS: 135251-85-3 MW: 308.38	These D-Luciferin analogs contain a ethyl or methyl moiety attached at the carboxy position, thus preventing it be recognized by the firefly luciferase enzyme. However, the ester is hydrolyzed effectively by lipase activity, and the resulted D-luciferin is well recognized by luciferase. D- Luciferin methyl ester is a sensitive substrate for the chemiluminescent measurement of lipase activity in homogeneous assays, or in cell lysate samples in combination with luciferase and its cofactors. Soluble in DMSO References C3-Luc Cells Are an Excellent Model for Evaluation of Cellular Immunity following HPV16L1 Vaccination Li-Li Li et al; Journal: PloS one (2016): e0149748
<b>D-Luciferin, methyl ester</b> FP-UVC630, 5mg	Genome-wide microRNA analysis identifies miR-188-3p as novel prognostic marker and molecular factor involved in colorectal carcinogenesis Martin Pichler; Journal: American Association for Cancer Research (2016): clincanres0497
CAS:73918-26-0 MW:294.3 HO $\times$ N $\times$ H	Identification of a Novel Protein Kinase A Inhibitor by Bioluminescence-Based Screening Authors: Tetsuya Ishimoteto al; Journal: Biological and Pharmaceutical Bulletin (2015): 19691974 Discovery of novel adenylyl cyclase inhibitor by cell-based screening Hiroki Mano et al; Journal: Biological and Pharmaceutical Bulletin (2014): 1689—1693
<b>D-Luciferin, 6'methyl ester</b> FP-APIRO0, 10mg CAS: 24404-90-8 MW: 294.35	Inhibitor of the firefly luciferase light producing system. This luciferin analog is useful in chemiluminescent dual assay systems with both luciferase and cytochrome P450 enzymes. Dealkylase removes the methyl ether which can then react with luciferase to produce light, in direct correlation with the P450 enzyme levels and activity.  D-Luciferin, 6'-methyl ester, Na FP-M1418B, 100 mg CAS: 3022-11-5 (Na salt) MW: 316.33

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FT- JQ6990

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FT- JQ6990	
D-Luciferin, Acetate FP-UVC640, 5 mg $^{(M)}$ MW:322.36 $^{\circ}$ $^{\circ}$	D-Luciferin acetate contains an acetate moiety attached at the 6-O-position, thus preventing it be recognized by the firefly luciferase enzyme. However, the acetate moiety is removed effectively by esterase activity, and the resulted D-luciferin is well recognized by luciferase. D-Luciferin acetate is a sensitive substrate for the chemiluminescent measurement of esterase activity in homogeneous assays, or in cell lysate samples in combination with luciferase and its cofactors. Soluble in DMSO
<b>D-Luciferin-AM</b> FP-M1909A (M) CAS:73918-26-0 MW: 352.39 $H^{O}$	D-Luciferin-AM ester contains an acetoxymethyl moiety attached at the carboxyl, thus preventing it be recognized by the firefly luciferase enzyme. However, the AM ester moiety is removed effectively by esterase activity, and the resulted D-luciferin is well recognized by luciferase. Tech Sheet

### **Related products**

Coelenterazine native, UP972333

- Luciferin, FT-27060A
- Firefly Luciferase, recombinant, FP-D1826B BTA-2 (Dual luciferase assay), FP-QU6360 ATP disodium salt, 00064A
- Coenzyme A, <u>627374</u> •
- Luciferase reporter gene assay kit, FP-JQ6810 •
- DMNPE-caged luciferin (cross easily biological membranes), FP-21639A •
- Firefly & Renilla Luciferase Single Tube Assay kit (dual luciferase), BE7812 .

#### **Ordering information**

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