

IVIS | XenoLight Rediject D-Luciferin *Ultra* Bioluminescent Reagent for *In Vivo* Imaging

Part Number: 760505

Rediject D-Luciferin Ultra (K⁺ salt) is a novel bioluminescence substrate in a ready to use format developed by the *in vivo* imaging leaders to fit your laboratory workflow. Rediject D-Luciferin Ultra is pre-formulated with a fluorescent marker to validate your substrate injection. With Caliper's Rediject D-Luciferin Ultra you can ensure reproducible results by minimizing variability due to formulation and substrate injection, minimizing freeze/thaw and controlling batch to batch variation.

Rediject D-Luciferin Ultra is preformulated with a rapidly clearing fluorescent dye to validate the integrity of your substrate injection, so with a quick fluorescent image on your IVIS system you know immediately if an injection failed and you can normalize your bioluminescence results. With Rediject D-Luciferin Ultra, you can have extra confidence in your data quality.

- Pre-formulated, batch controlled D-Luciferin for *in vivo* use
- Instantly validate your injection quality and minimize data variability
- Save substantial time and effort by minimizing pre-imaging preparation steps
- Dispensed to image 5 animals per vial* (10 vials/kit)
- *In vivo* imaging quality, validated on IVIS imaging systems

Color and Form: Yellow colored solution (D-Luciferin Potassium salt in PBS)

Concentration: 30 mg/mL

Volume per vial: 10 sterile vials each containing 850 μ L of 30 mg/ml D-Luciferin

Storage and Handling: Store at ≤ -70 °C. Just before your experiment, thaw required number of vials in a 37 °C water bath, vortex and it is ready to use. Repeated freeze thaw is not recommended. Rediject D-Luciferin supports intravenous, subcutaneous or intraperitoneal injection.

For *in vivo* imaging studies, we recommend intraperitoneal injection at 150 mg/kg (150 μ L /mouse*). Load a 1 mL syringe directly from the vial and inject using a 25 gauge needle. For Fluorescence imaging, select exposure time between 1 and 5 seconds and image using 745 nm excitation and 800 nm emission filter set (ICG filter set for IVIS Lumina). Select an ROI on the scruff of the neck on the dorsal side to evaluate the accuracy of your intraperitoneal injection. For ventral imaging, ROI should be drawn around the thoracic region.

* Calculations based on a 30g mouse

Instantly Validate Substrate Injection Quality

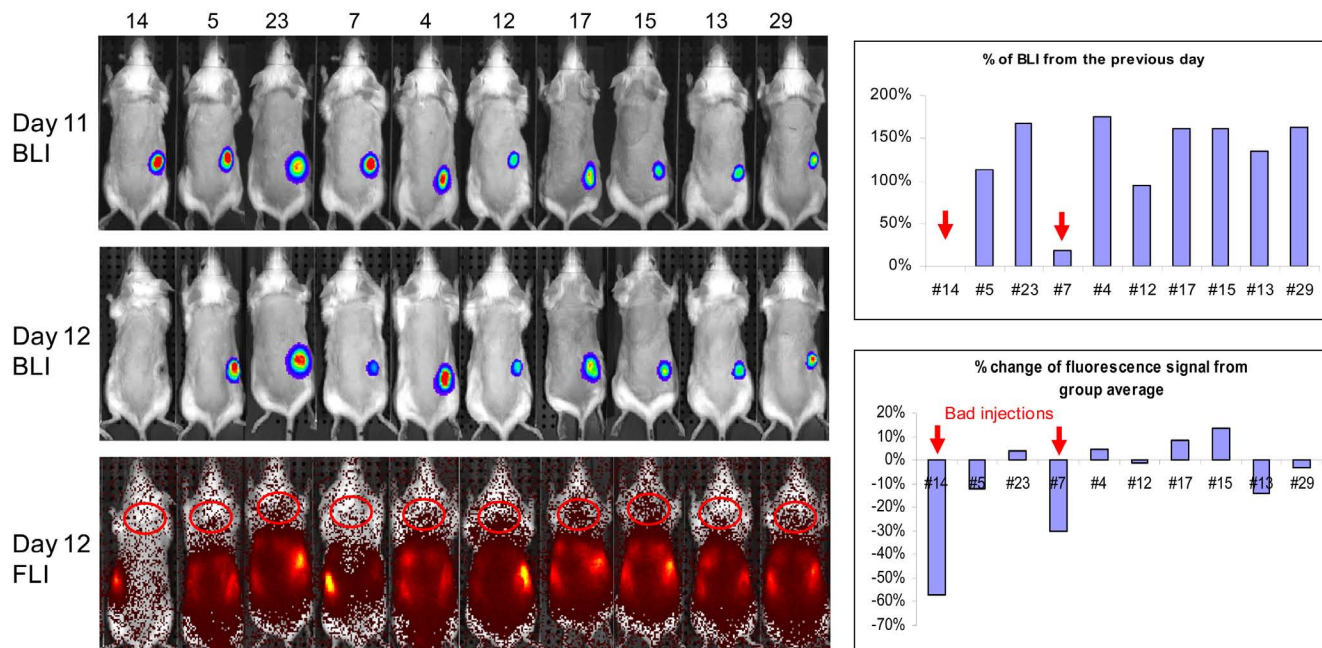


Figure 1. Mice (n=10) were implanted with LL2-luc tumors subcutaneously and imaged on Day 11 and 12 post implant. Mice were injected by an intraperitoneal route (i.p.) with 150 μ L Rediject Luciferin Ultra solution (150 mg/kg). Just before taking the BLI images, fluorescent imaging was performed on the dorsal side. Fluorescent images were quantified by placing the region of interest away from the abdominal region where the substrate is i.p. injected to get a better read out of the systemic distribution of the substrate. For dorsal images, the ROI is drawn around the scruff area (back of neck) for quantification of the reference fluorescence signal, while for ventral images the ROI is drawn around the thoracic region. Fluorescent signal is measured in efficiency units. In this study mouse #14 and 7 showed a decline or no bioluminescent signal due to incorrect substrate injection. This missed injection was instantly picked up by a drop in Fluorescent signal of greater than 30% in both instances when compared to the average Fluorescent signal. In this study any mouse that had greater than a 30% decrease in Fluorescent signal from the average needed to be reimaged.

Check out our other Xenolight reagents, all of which are optimized for *in vivo* imaging with IVIS systems

Catalog Number	Product Name	Quantity
760504	XenoLight Rediject D-Luciferin	50 injections
760505	XenoLight Rediject D-Luciferin Ultra	50 injections
760506	XenoLight Rediject Coelenterazine h	50 injections
122796	XenoLight D-Luciferin - K ⁺ Salt	1 g
125673	XenoLight CF 680 Fluorescent Labeling Kit	3 labelings
125674	XenoLight CF 750 Fluorescent Labeling Kit	3 labelings
125675	XenoLight CF 770 Fluorescent Labeling Kit	3 labelings
125676	XenoLight CF 680 NIR Fluorescent Dye	1 μ mole
125677	XenoLight CF 750 NIR Fluorescent Dye	1 μ mole
125678	XenoLight CF 770 NIR Fluorescent Dye	1 μ mole
125964	XenoLight CF DiR	25 mg