

IVIS | XenoLight Rediject Inflammation Probe

Part Number: 760535- Explorer kit (Image 5 animals/kit)
760536- Standard kit (Image 20 animals/kit)

XenoLight Rediject Inflammation probe is a chemiluminescent reagent for monitoring Inflammation. This probe is offered in a ready-to-use format and can be conveniently applied to study myeloperoxidase (MPO) activity of activated phagocytes. The Rediject Inflammation Probe will allow for longitudinal tracking of MPO level and inflammation status, *in vivo*, in a variety of disease models. This probe has been validated *in vivo* in detecting rheumatoid arthritis and contact hypersensitivity. Given the probe's peak emission is 425 nm, the signal is significantly attenuated when imaging at depth, posing challenges for detecting inflammation in deep tissues.

- Novel ready-to-use probe to monitor phagocyte mediated inflammation non-invasively
- Dispensed to image 5 animals (explorer kit) or 20 animals (standard kit)*
- Includes a fluorescent tracer to validate substrate injection
- Improved sensitivity due to the chemiluminescent read-out
- *In vivo* imaging quality, validated on IVIS imaging systems

Color and Form: Slightly Green Colored solution dissolved in 1x PBS

Concentration: 40 mg/mL

Shipping Condition: The kit will be shipped in cold gel packs to avoid temperature variations

Volume per Vial: Explorer kit: 1 sterile amber vial containing 850 μ L of 40 mg/ml probe
Standard kit: 4 sterile amber vials containing 850 μ L of 40 mg/ml probe

Storage and Handling: Store at ≤ -20 °C, thaw the vial in a 37 °C water bath just before experiment, vortex and it is ready to use. Repeated freeze thaw is not recommended.

For *in vivo* imaging studies, we recommend intraperitoneal (i.p.) injection at 200 mg/kg (150 μ L /mouse*). Load a 1mL syringe directly from the vial and inject using a 25 gauge needle. Best time to image is 10 minutes post i.p. injection of the probe. We recommend exposure time of 5 minutes for better sensitivity. 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.

For imaging at depth, this probe can be injected intravenously at 200 mg/kg (150 μ L /mouse*). With i.v. injections, the best time to image is immediately post injection with a 5 min acquisition. For rats we recommend the same dosage of 200mg/kg.

* Calculations based on a 30g mouse

Detection of Inflammation in a Rheumatoid Arthritis (RA) Model

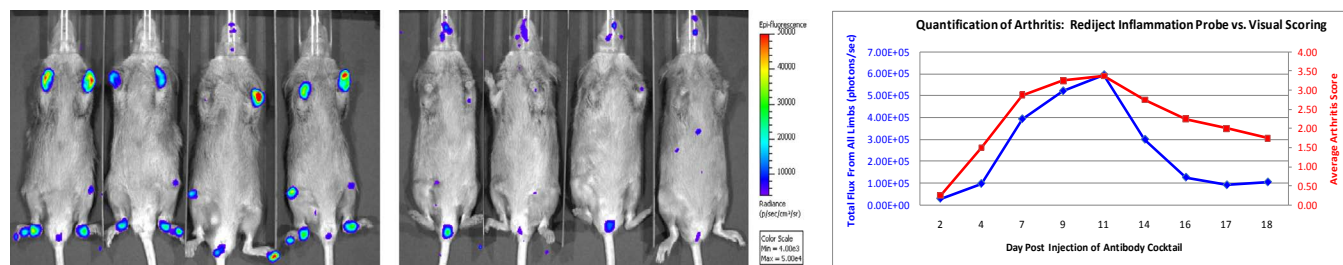


Figure 1. DBA1 mice were induced to develop RA with Atherogen monoclonal antibody cocktail (Chondrex, Inc). Mice were monitored for arthritis development by conventional visual scoring method (red curve, bottom panel) and by quantifying the chemiluminescent signal from the diseased tissues (blue curve, bottom panel). On day 11, the diseased mice showed severe inflammation in the extremities, which correlated with an increase of chemiluminescent signal at the knee joints, front and rear paws (Top left) when compared to control mice (top right panel). Images were taken 10 minutes post i.p. injection of the probe with IVIS Spectrum (5 minutes exposure time).

Instantly Validate Substrate Injection Quality

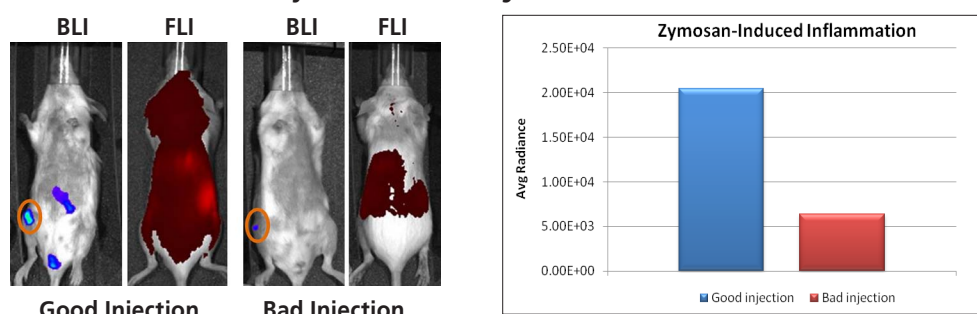


Figure 2. Zymosan was used to induce experimental sterile inflammation. In macrophages, Zymosan-induced responses include the induction of proinflammatory cytokines, arachidonate mobilization, protein phosphorylation, and inositol phosphate formation. The right leg of each mouse was injected intra-articularly with 10 μ L of Zymosan A (30mg/mL suspended in 5% glucose solution). Mice were injected with 200mg/kg of Rediject Inflammation probe i.p. and imaged 10 minutes post injection. Image shown was taken at 48 hours post Zymosan injection. Orange circle on the BLI images show inflammation caused by Zymosan. Fluorescent images to validate substrate injection were taken right before BLI imaging. Mice with incorrect i.p. injection showed greater than 65% reduction in the fluorescent signal as shown in the chart.

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
760535	XenoLight Rediject Inflammation probe	5 injections
760536	XenoLight Rediject Inflammation probe	20 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
760531	XenoLight RediJect Bone Probe 680	5 injections
760532	XenoLight RediJect Bone Probe 680	20 injections
760561	XenoLight RediJect 2-DG 750 probe	5 injections
760562	XenoLight RediJect 2-DG 750 probe	20 injections
760563	XenoLight RediJect Integrin 750 probe	5 injections
760564	XenoLight RediJect Integrin probe	20 injections
760567	XenoLight RediJect 2-DG-750 control dye	5 injections
760667	XenoLight RediJect Integrin 750 control dye	5 injections
125964	XenoLight CF DiR	25 mg