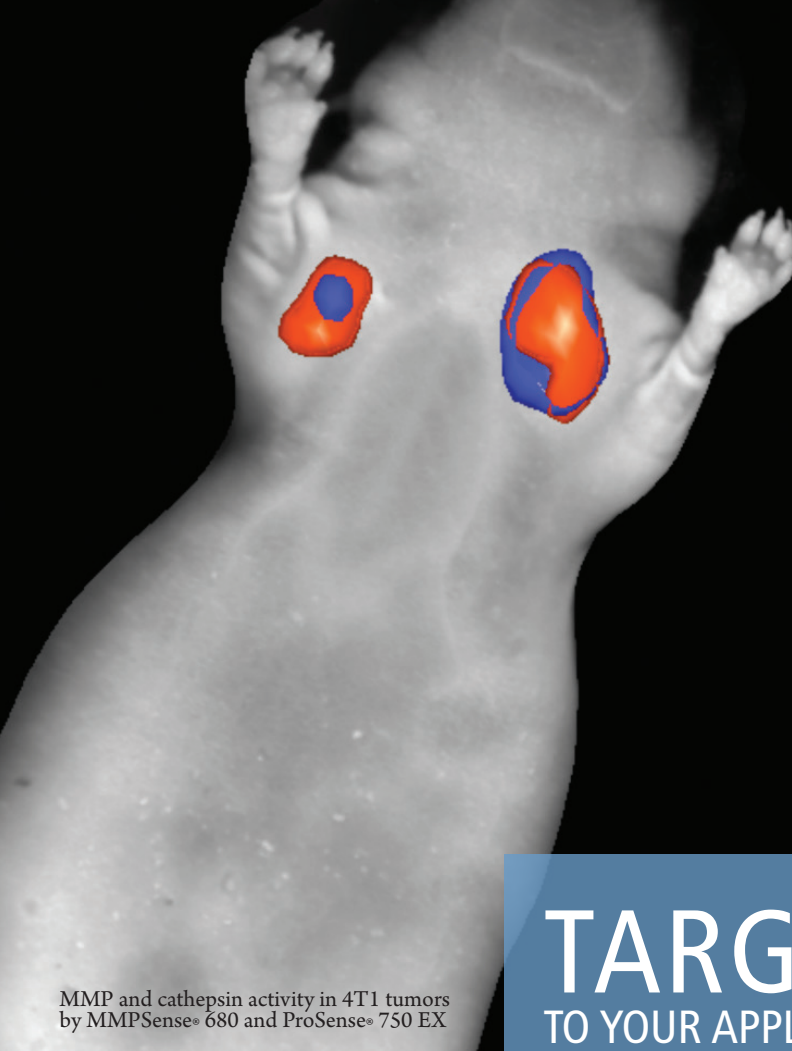


OBTAIN MORE INFORMATION FROM YOUR TARGET

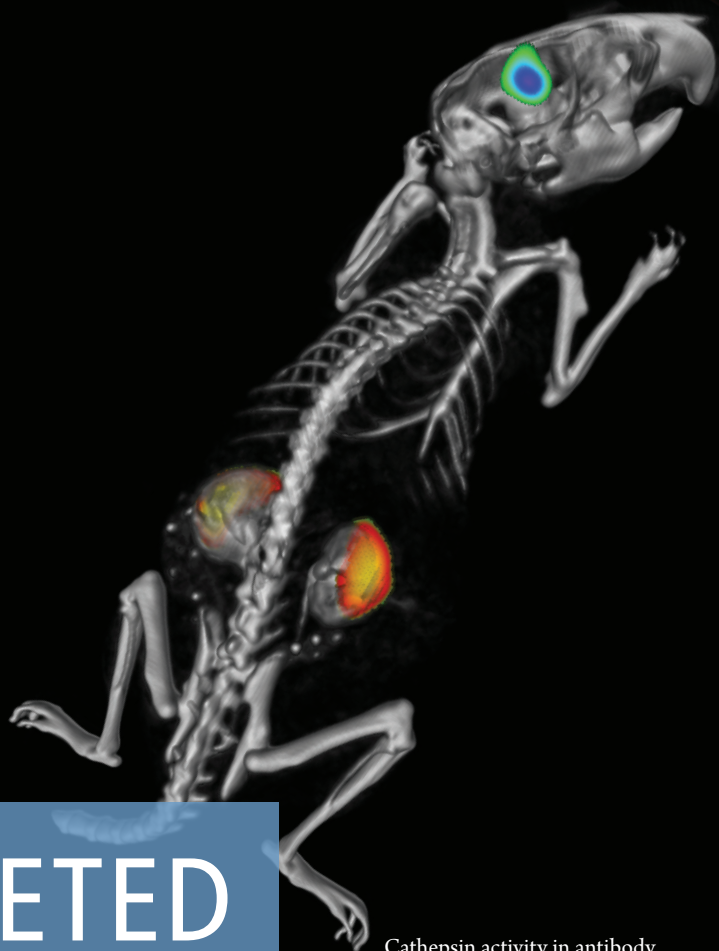


In Vivo Imaging Agents

For research use only. Not for use in diagnostic procedures.

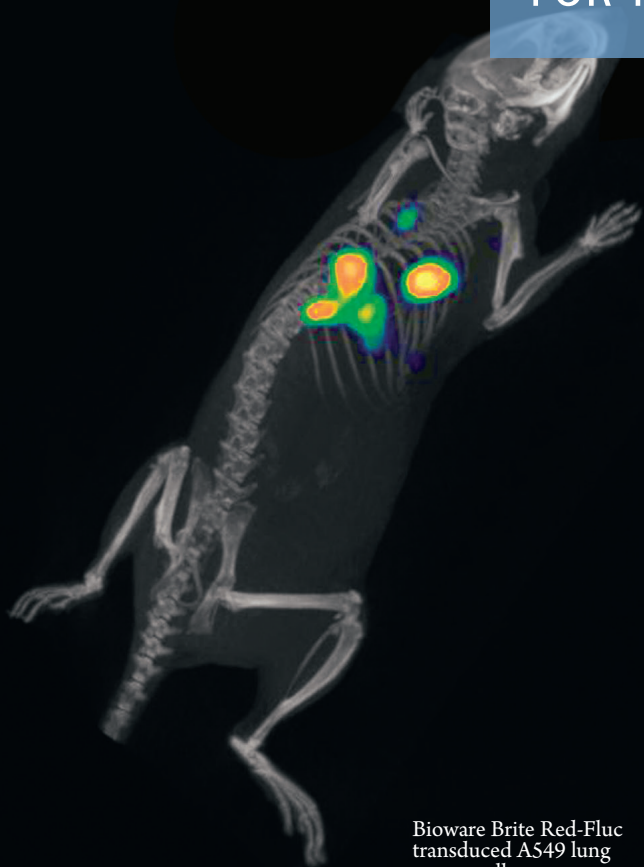


MMP and cathepsin activity in 4T1 tumors by MMPsense® 680 and ProSense® 750 EX

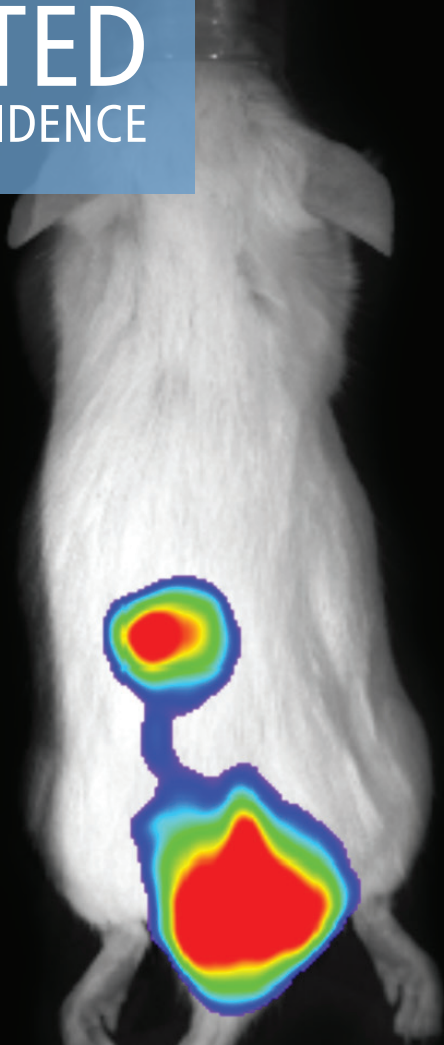


Cathepsin activity in antibody induced Arthritis by ProSense 750 EX

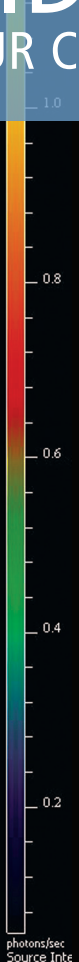
**TARGETED
TO YOUR APPLICATION AND
VALIDATED
FOR YOUR CONFIDENCE**



Bioware Brite Red-Fluc transduced A549 lung cancer cells

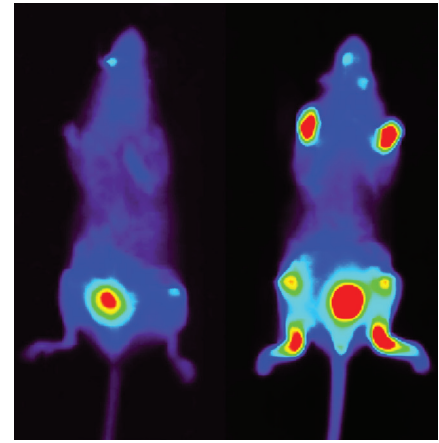


Migration of UTI infection from bladder to kidney by *Proteus mirabilis* strain Xen44



MORE INSIGHTFUL RESEARCH RESULTS

PerkinElmer's comprehensive suite of fluorescent *in vivo* imaging agents enables unmatched imaging of a broad range of disease-related biomarkers and pathways in your research models. Our fluorescent agents and labels are optimized for use in the full range of PerkinElmer optical *in vivo* imaging systems, as well as other fluorescence microscopy systems and many *in vitro* and cell-based systems.



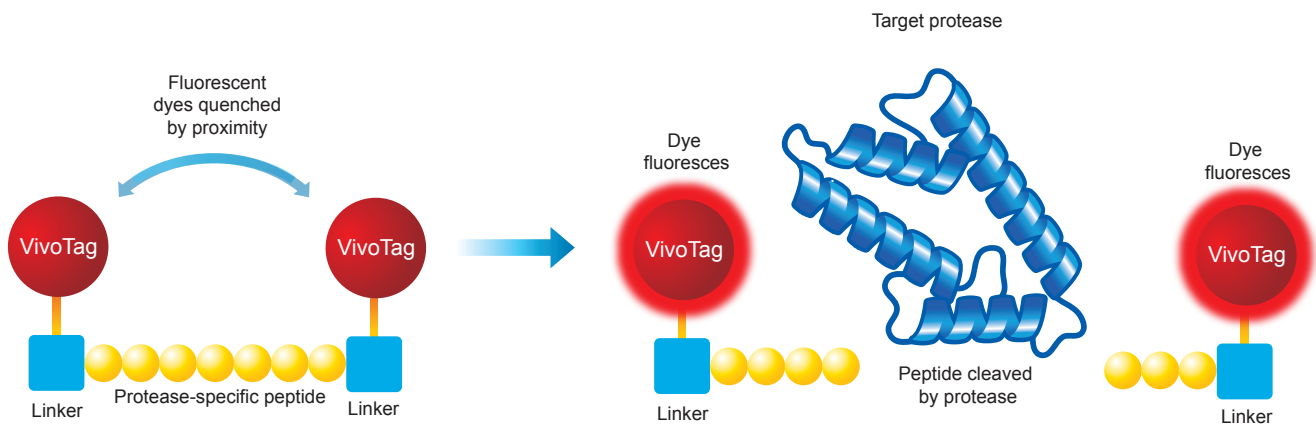
Fluorescent images of Neutrophil Elastase 680 FAST activity in control and arthritic mice using the IVIS Spectrum.

FLUORESCENT *IN VIVO* IMAGING AGENTS

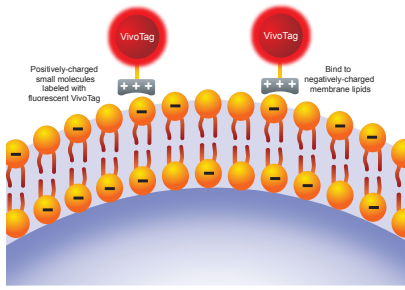
Activatable Fluorescent Agents

Activatable agents are optically silent upon injection but are activated *in vivo* through cleavage by specific protease biomarkers of disease. Benefits include biologically specific readouts and high signal-to-noise at the target biology. The FAST platform represents the next generation of agents from PerkinElmer. Utilizing a novel small molecule design, the FAST agents offer improved specificity, accelerated activation profile, and earlier imaging timepoints.

Product	Product Description	Catalog Number
Cat B 680 FAST	Selective imaging of cathepsin B proteinases (Cat B). Optically silent in the inactivated state, becoming highly fluorescent when activated.	NEV11112
Cat B 750 FAST		NEV11098
Cat K 680 FAST	Imaging of cathepsin K activity in oncology applications involving metastasis to the bone as well as a broad range of bone applications including bone loss, tumor-induced osteolysis and bone changes following arthritis.	NEV11000
MMPSense 645 FAST	Imaging of MMP (metalloproteinase) activity is involved in many disease-related phenomena including cancer propagation, invasion and metastasis, rheumatoid arthritis and areas of cardiovascular disease.	NEV10100
MMPSense 680		NEV10126
MMPSense 750 FAST		NEV10168
Neutrophil Elastase 680 FAST	Fluorescent neutrophil elastase-activatable agent that is optically silent upon injection and produces fluorescent signal after cleavage by elastase produced by neutrophil cells.	NEV11169
ProSense 680	Versatile imaging of changes in cathepsin-based protease activity as seen in a number of pathological states and disease-related events including rheumatoid arthritis, cancer, atherosclerosis, angiogenesis and cardiovascular disease.	NEV10003
ProSense 750 EX		NEV10001EX
ProSense 750 FAST		NEV11171
ReninSense 680 FAST	Imaging of renin-angiotensin pathway associated with hypertension, kidney and cardiovascular disease.	NEV11079



Activatable agents mechanism of action.



BacteriSense mechanism of action

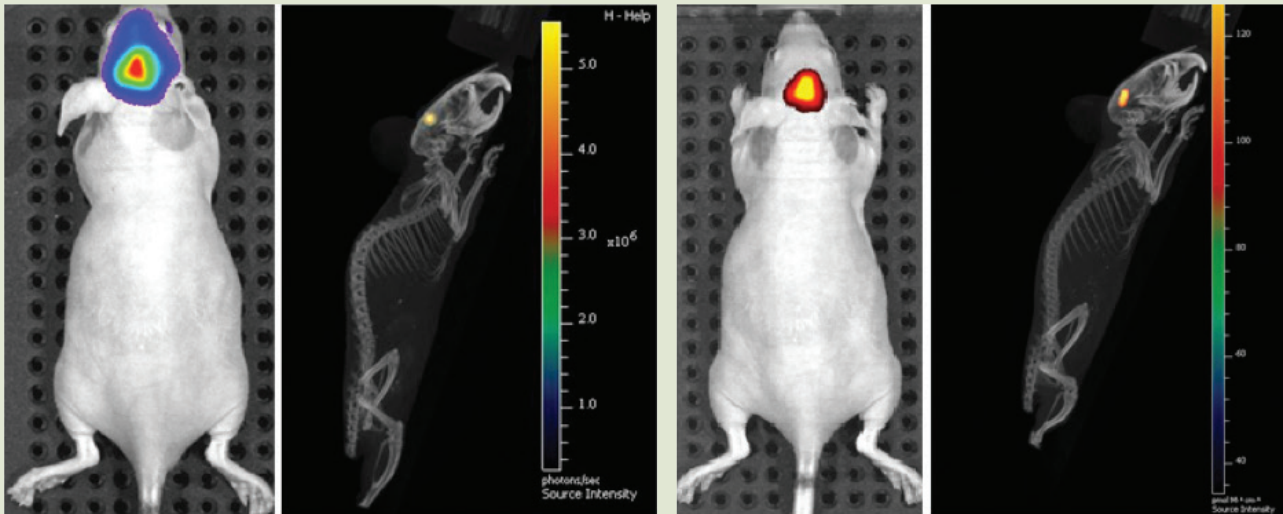
Targeted Fluorescent Agents

Optimized *in vivo* imaging agents that actively target and bind to specific biomarkers. Benefits include the agents' highly specific targeting to key biological mechanisms.

Product	Product Description	Catalog Number
Annexin-Vivo 750	<i>In vivo</i> targeting of membrane-bound phosphatidylserine exposed during the early stages of apoptosis.	NEV11053
BacteriSense 645	Fast-clearing, targeted probe which binds to negatively charged lipids on the bacterial cell membrane, enabling the monitoring of infection progression in real time.	NEV10080
BombesinRSense 680	Target and quantify up-regulation of bombesin receptors (BBR) <i>in vivo</i> associated with tumor proliferation. These receptors are also over-expressed in a variety of cancers.	NEV10090
FolateRSense 680	Highly specific and sensitive in detection of Folate Receptor protein. Can be used to closely monitor and quantitate tumor growth and metabolism.	NEV10040
HypoxiSense 680	Detects the tumor cell surface expression of carbonic anhydrase 9 (CA IX) protein, which increases in hypoxic regions within many tumors.	NEV11070
IntegriSense 645	Targets integrin $\alpha v \beta 3$ expressed in oncology, atherosclerosis and angiogenesis disease models.	NEV10640
IntegriSense 680		NEV10645
IntegriSense 750		NEV10873
OsteoSense 680 EX	Optimized imaging of bone turnover through binding of hydroxyapatite.	NEV10020EX
OsteoSense 750 EX		NEV10053EX
OsteoSense 800		NEV11105
TLectinSense 680	NIR-labeled Tomato Lectin protein which has high binding affinity for glycoprotein N-acetylglucosamines on the surface of vascular endothelial cells. Use for vascular mapping <i>in vivo</i> .	NEV10060
Transferrin-Vivo 750	NIR-labeled transferrin detects transferrin receptor upregulation associated with the increased cell metabolic need for iron in cancer and inflammatory cells. Also detects normal iron metabolism in the liver.	NEV10091

Multimodal Detection with Bioluminescent and Fluorescent Imaging Agents in the Same Animal Reveals the Context of Disease

Using fluorescent and bioluminescent imaging agents in conjunction with microCT and optical imaging instrumentation provides synchronization of functional and anatomical data, simultaneously and co-registered, for true quantitative 3D image data. Composite functional and anatomical imaging obtained by using fluorescent and bioluminescent agents together gives a clearer context and understanding of the mechanisms of disease. Imaging the reagent combination with the PerkinElmer's IVIS[®] SpectrumCT and Quantum enables the co-registration of microCT and optical image data for more complete biological assessment.



***In vivo* bioluminescent imaging of Bioware Brite U-87 MG-Red-Fluc orthotopic tumor mouse.** In this study, 300,000 cells were implanted directly into the brain of nude mice and tumors were imaged using the IVIS Spectrum optical system two weeks post-injection. Three-dimensional DLIT (Diffuse Light Imaging Tomography) reconstruction of bioluminescent signal shows precise location of the brain tumor.

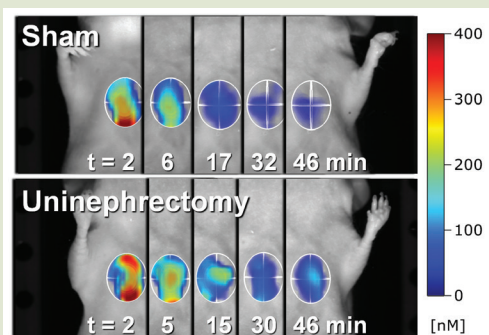
***In vivo* fluorescent imaging of same Bioware Brite U-87 MG-Red-Fluc orthotopic tumor mouse.** Mouse was injected with a single dose of IntegriSense750 imaging agent to detect expression of integrin $\alpha v \beta 3$ and imaged using the IVIS SpectrumCT instrument 24 hrs post-injection. Three-dimensional FLIT (Fluorescent Imaging Tomography) reconstruction of the signal shows precise localization of the $\alpha v \beta 3$ expressing tumor.

Vascular and Physiological Fluorescent Agents

PerkinElmer's vascular and physiological agents are a range of highly fluorescent *in vivo* imaging molecules that remain highly stable and localized in the anatomy for various periods of time to enable imaging of disease physiology, vasculature, vascular permeability and angiogenesis.

Product	Product Description	Catalog Number
AngioSense 680 EX	Imaging of vascularity, perfusion and vascular permeability. Remains localized in vasculature for 0-4 h; accumulates in tumors and arthritic joints at 24 h.	NEV10054EX
AngioSense 750 EX		NEV10011EX
AngioSPARK 680	Imaging of vascularity, perfusion and vascular permeability; long pharmacokinetic profile.	NEV10149
AngioSPARK 750		NEV10150
GastroSense 750	Imaging to monitor gastric emptying and the impact of various drugs on gastric motility; may also be used as an anatomical marker for the stomach.	NEV11121
Genhance 680 (1 mg)	Small molecule fluorescence agent. Use as a control or in vascular permeability imaging.	NEV10117
Genhance 680 (5 mg)		NEV10130
Genhance 750 (1 mg)		NEV10118
Genhance 750 (5 mg)		NEV10177
GFR-Vivo 680	NIR fluorescent imaging agent to non-invasively determine glomerular filtration rate (GFR) <i>in vivo</i> in models of kidney disease, dysfunction, and drug toxicity.	NEV30000
Superhance 680	Imaging of vascularity, perfusion and vascular permeability; short pharmacokinetic profile.	NEV10116

Measure Kidney Function Non-Invasively *in vivo*



Glomerular filtration rate (GFR) is the gold standard in kidney function assessment and is used to determine progression of kidney disease and drug-induced kidney toxicity. GFR-Vivo™ 680 is a near infrared (NIR) fluorescent-labeled form of inulin in a spectral region providing low background and high tissue penetration (ex/em = 670/685 nm) in *in vivo* application.

Fluorescence molecular tomographic (FMT) imaging of the heart was used to detect and quantify blood levels of GFR-Vivo 680 at multiple time points, providing the necessary data to calculate the clearance rates in individual animals. Following an intravenous bolus of GFR-Vivo 680 in SKH-1E mice, FMT® images were acquired at 1, 5, 15, 30, and 45 minutes post-injection GFR-Vivo 680, in combination with FMT heart imaging, provides a non-invasive fluorescent imaging approach to generate consistent GFR measurements in models of kidney disease, dysfunction, and drug toxicity.

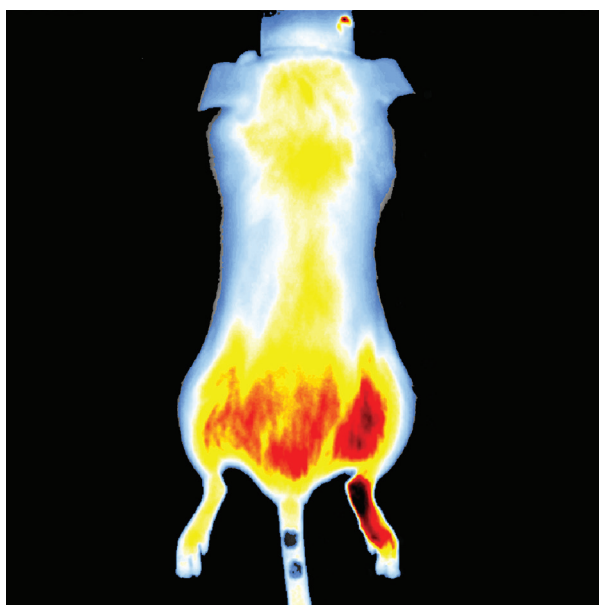
Targeted Fluorescent XenoLight Probes

Product	Product Description	Catalog Number
XenoLight® RediJect™ COX-2 Probe Explorer kit (5 injections)	Imaging probe that specifically detects the cyclooxygenase-2 (COX-2)	133316
XenoLight® RediJect™ COX-2 Probe Standard kit (20 injections)		133314
XenoLight® RediJect™ COX-2 Probe Control dye (5 injections)	Non reactive control dye for COX-2 probe	133349
XenoLight® RediJect™ Bacterial Detection Probe 750 (5 injections)	NIR targeted probe for non-invasive detection of bacterial infections <i>in vivo</i>	133397
XenoLight® RediJect™ Bacterial Detection Probe 750 (20 injections)		133398
XenoLight® RediJect™ Bacterial Detection Probe Control dye (5 injections)	Non reactive control dye for RediJect Bacterial Detection Probe	133399
XenoLight® RediJect™ 2-DG 750 Probe Explorer kit (5 injections)	NIR targeted probe for non-invasive imaging of glucose uptake <i>in vivo</i>	760561
XenoLight® RediJect™ 2-DG 750 Probe Standard kit (20 injections)		760562
XenoLight® RediJect™ 2-DG 750 control dye (5 injections)	Non-reactive control dye for RediJect 2-DG 750 probe	760567

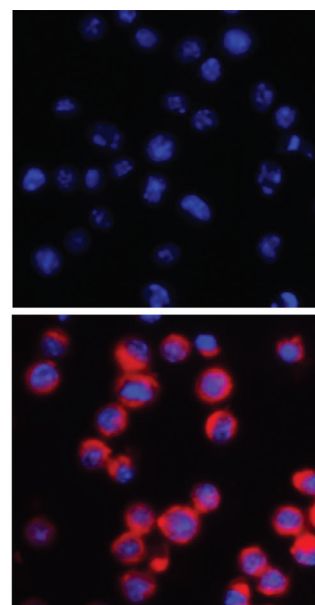
Fluorescent Labels and Dyes

PerkinElmer fluorochromes and nanoparticles are designed specifically to enable customized development of novel superbright fluorescent imaging agents, with properties that are ideal for use in *in vivo* or *in vitro* imaging.

Product	Product Description	Catalog Number
AminoSPARK 680 (3 mg)	Nanoparticle fluorescent label for a target ligand. Superbright with extended pharmacokinetic profile and the ability for multivalent ligand coupling.	NEV10142
AminoSPARK 750 (3 mg)		NEV10143
VivoTag-S 680 (1 mg)	Small molecule fluorochrome to label a target ligand. Optimized for single molecule loading. Amine-reactive for labeling via an NHS ester linkage.	NEV10121
VivoTag-S 680 (5 mg)		NEV10122
VivoTag-S 750 (1 mg)		NEV10123
VivoTag-S 750 (5 mg)		NEV10124
VivoTag-S 750-MAL (1 mg)	Small molecule fluorochrome to label a target ligand. Optimized for single molecule loading. Thiol-reactive for coupling via maleimide chemistry to label free cysteines or thiol groups.	NEV11223
VivoTag-S 750-MAL (5 mg)		NEV11224
VivoTag 645 (1 mg)	Amine-reactive near infrared fluorochrome for labeling via an NHS ester linkage to peptides, small molecules, proteins, antibodies or macromolecules. Optimized for <i>in vitro-in vivo</i> imaging.	NEV11173
VivoTag 645 (5 mg)		NEV11174
VivoTag 645-MAL (1 mg)	Red fluorochrome for coupling via maleimide chemistry to label free cysteines or thiol groups. Optimized for <i>in vitro-in vivo</i> imaging.	NEV11273
VivoTag 645-MAL (5 mg)		NEV11274
VivoTag 680 XL-MAL (1 mg)	NIR fluorochrome for coupling via maleimide chemistry to label free cysteines or thiol groups. Lower quenching than VivoTag-S 680.	NEV11219
VivoTag 680 XL-MAL (5 mg)		NEV11220
VivoTag 680 XL (1 mg)	Fluorochrome for labeling small molecules, proteins, antibodies, nanoparticles or other macromolecules. Hydrolytically stable. Low self-quenching for higher loading.	NEV11119
VivoTag 680 XL (5 mg)		NEV11120
VivoTag 680XL Protein Labeling Kit	An easy and convenient way to label up to 10 mg of protein. Each kit contains our superior <i>in vivo</i> optimized VivoTag 680XL (2 x 250 µg) and everything you need to carry out the reaction and purify the labeled protein.	NEV11118
VivoTag 800 (1 mg)	Small molecule fluorochrome to label a target ligand. Optimized for high-density loading.	NEV11107
VivoTag 800 (5 mg)	Small molecule fluorochrome to label a target ligand. Optimized for high-density loading.	NEV11108
VivoTrack 680 Explorer	NIR water soluble cell labeling agent that can generate brightly-labeled and highly viable cells suitable for detection and longitudinal tracking <i>in vivo</i> . Contains 1 vial that can stain up to 2 x 10 ⁸ cells.	NEV12001
VivoTrack 680 Standard	NIR water soluble cell labeling agent that can generate brightly-labeled and highly viable cells suitable for detection and longitudinal tracking <i>in vivo</i> . Contains 5 vials, each vial can stain up to 2 x 10 ⁸ cells.	NEV12000
XenoLight® DiR (25 mg)	NIR dye for non-invasive imaging of cell homing (stem cells, T cells)	125964



Fluorescent images using the IVIS Spectrum of VivoTrack™ 680-induced macrophages trafficking to carrageenan-induced inflamed paw (right) but not control paw (left).



Thioglycollate-elicited peritoneal macrophages labeled with VivoTrack 680 (bottom) or unlabeled (top).

FLUORESCENT IMAGING PANELS

With PerkinElmer's Fluorescent In Vivo Imaging Panels, getting the results you need has never been easier. Our most published fluorescent imaging agents are bundled into application panels targeting key disease areas to enhance your imaging data. Each application panel contains up to seven fluorescent probes, carefully grouped together and designed to optimize your findings and simplify your research.

Fluorescent Panel	Part Number	Used To	Panel Contents		
Arthritis Panel	NEV20003	Detect molecular players in arthritis pathology	AngioSense 750EX CAT B 750 FAST	CAT K 680 FAST MMPSense 680	OsteoSense® 680EX ProSense 680
Tumor Metabolism Panel	NEV20015	Non-invasively measure tumor microenvironment biology for early detection of treatment-induced biological changes	AngioSense 680EX Annexin-Vivo™ 750 BombesinRSense™ 680	FolateRSense 680 MMPSense 750 FAST	ProSense 680 Transferrin-Vivo™ 750
Toxicology Panel	NEV20016	Detect molecular players and measure early changes in drug-induced injury	AngioSense 680EX Annexin-Vivo 750	MMPSense 750 FAST* ReninSense™ 680 FAST	Transferrin-Vivo 750
Oncology Panel	NEV20005	Non-invasively characterize the tumor environment to assess biological changes associated with disease progression or treatment efficacy	AngioSense 680EX FolateRSense™ 680	IntegriSense 750 MMPSense 750 FAST	ProSense 750 EX
Inflammation Panel	NEV20013	Quantify inflammation biology, particularly in longitudinal studies for understanding disease pathogenesis	AngioSense 680EX FolateRSense 680	IntegriSense 750 MMPSense 750 FAST	Neutrophil Elastase 680 FAST ProSense 750 FAST
Vascular Panel	NEV20014	Characterize biological changes associated with vascular injury and disease	AngioSense 680EX CAT B 680 FAST	IntegriSense 680 MMPSense 750 FAST	ProSense 750 FAST
Featured Probes Pack	NEV20011	Approach different research areas by sampling our most popular and published fluorescent probes	AngioSense 680EX FolateRSense 680	IntegriSense 750 MMPSense 750 FAST	ProSense 680 VivoTag™ 680XL Protein Labeling Kit
Sample Pack	NEV20000	Combine fluorescence and bioluminescent imaging by sampling our most popular and published fluorescent probes, as well as ready-to-use injectable luciferin for bioluminescent imaging	AngioSense 680EX IntegriSense™ 750	MMPSense 750 FAST ProSense 750 EX	XenoLight® RediJect™ D-Luciferin

*2 MMPSense are provided for the Annexin/MMPSense/Transferrin cocktail as detailed in the Fluorescent Panel User Guide.

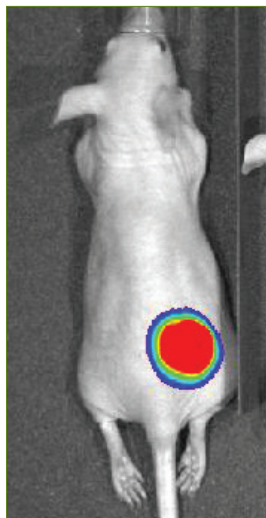
All panels contain full size fluorescent probes (10 doses) except for the Sample Pack which contains sample sizes (3 doses) of each fluorescent probe and 1 full size XenoLight RediJect D-luciferin (50 doses).

Panels are not open to substitution.

FLUORESCENT AGENTS BY DISEASE AREA

Built around your applications – choose one, or use in combination for your disease focus to obtain more information (see list)

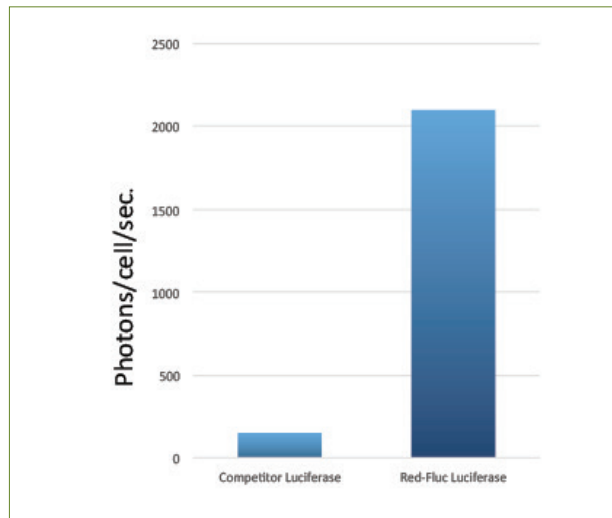
	Angiogenesis	Apoptosis	Arthritis	Atherosclerosis	Bone Loss	Cardiovascular Disease	Hypertension	Infectious Disease	Inflammation	Kidney function	Oncology	Pulmonary Disease	Vascular Disease	Arthritis Panel	Tumor Metabolism Panel	Toxicology Panel	Oncology Panel	Inflammation Panel	Vascular Panel
Easily activated fluorescence probes enable specific imaging of biological processes that underlie disease																			
Cat B 680 FAST			•	•		•			•		•	•	•						•
Cat B 750 FAST			•	•		•			•		•	•	•	•					
Cat K 680 FAST			•	•		•					•			•					
MMPSense® 680			•	•	•	•			•		•	•	•	•					
MMPSense 645 FAST			•	•		•			•		•	•	•						
MMPSense 750 FAST			•	•		•			•		•	•	•		•	•	•	•	•
Neutrophil Elastase 680 FAST			•						•			•	•					•	
ProSense® 680			•	•		•			•		•	•	•	•	•				
ProSense 750EX			•	•		•			•		•	•	•				•		
ProSense 750 FAST			•	•		•			•		•	•	•					•	•
ReninSense™ 680 FAST							•			•						•			
Targeted probes enable specific areas of interest to be detected, monitored and measured <i>in vivo</i>																			
2-DG 750 Probe											•								
Annexin-Vivo 750		•		•							•				•	•			
BacteriSense™ 645								•											
Bacterial Detection Probe 750								•											
COX-2 Probe			•								•								
FolateRSense™ 680			•			•			•		•	•			•		•	•	
IntegriSense™ 645	•			•		•			•		•	•	•						
IntegriSense 680																			•
IntegriSense 750	•			•		•			•		•	•	•				•	•	
HypoxiSense 680											•								
Inflammation Probe			•						•		•								
OsteoSense® 680EX				•	•	•	•							•					
OsteoSense 750EX			•	•	•	•													
OsteoSense 800			•	•	•	•													
TLectinSense™ 680	•								•		•								
BombesinRSense™ 680											•				•				
Transferrin-Vivo™ 750											•			•	•				
Vascular and physiologic fluorescence agents are distributed passively through blood vessels to enable imaging of vascularity, blood pooling near tumors and edema																			
AngioSense® 680EX	•		•						•		•	•	•		•	•	•	•	•
AngioSense 750EX	•		•						•		•	•	•	•					
AngioSPARK 680	•		•	•					•		•	•	•						
AngioSPARK 750	•		•	•					•		•	•	•						
Superhance 680	•		•						•		•		•						
GFR-Vivo 680										•									
Optical Reporter Oncology Cell Lines and Microorganisms																			
Bioware® Brite Cell Lines	•	•									•								
Bioware Microorganisms								•											
RediFect Lentiviral particles	•	•									•								



Bioluminescence image of Bioware Brite HCT-116-Red-Fluc subcutaneous tumor, imaged using the IVIS Spectrum system.



Bioluminescence image of Bioware Brite U-87 MG Red-Fluc orthotopic tumor imaged using the IVIS Spectrum system.



In vivo Comparison: Five million of both Bioware Brite HepG2-Red-Fluc cells and competitor luciferase transduced HepG2 cells were injected s.c. in the flank of nude mice; tumors were imaged after five weeks. Red-Fluc transduced cells generate 15 times brighter BLI signal than the corresponding transduced cells despite similar tumor size. (Peterson, et al. 2014) Brightness varies by cell line.

BIOWARE® BRITE BIOLUMINESCENT ONCOLOGY CELL LINES

Expand your oncology models to deep tissue tumors with brighter, red-shifted cell lines. PerkinElmer’s new Bioware® Brite light-producing cell lines are significantly brighter than other firefly luciferases. *In vitro* studies have shown that Red-Fluc is 10-20 fold brighter*. Available in a wide range of cancer models including breast, colorectal, lung, and prostate, the cells have been stably transduced with the red-shifted firefly luciferase gene from *Luciola Italica* (Red-Fluc), for a brighter, red-shifted signal.

By emitting intensified, longer wavelength light, our bioluminescent oncology cell lines allow you to visualize and monitor the growth of deep tissue tumors *in vivo*.

The optimized Red-Fluc luciferase enables more sensitive *in vivo* optical imaging with less tissue attenuation so you can detect tumor development earlier, and monitor tumor growth and metastases in both subcutaneous and orthotopic models.

Bioware® Brite cell lines labeled with enhanced Red-Fluc vector

Product	Product Description	Catalog Number
HT1080-Red-Fluc	Human Fibrosarcoma Cancer Cell line.	BW 128092
4T1-Red-Fluc	Murine Breast Cancer Cell line	BW 124087
GL261-Red-Fluc	Murine Glioma Cell line	BW 134246
HepG2-Red-Fluc	Human Hepatic Cancer cell line	BW 134280
PC-3-Red-Fluc	Human Prostate Cancer Cell line	BW 128444
LnCaP-Red-Fluc	Human Prostate Cancer Cell line	BW 125055
B16-F10-Red-Fluc	Murine Melanoma Cancer Cell line	BW 124734
HCT-116-Red-Fluc	Human Colorectal Cancer Cell line	BW 124318
HT-29-Red-Fluc	Human Colorectal Cancer Cell line	BW 124353
Colo205-Red-Fluc	Human Colorectal Cancer Cell line	BW 124317
U-87 MG-Red-Fluc	Human Brain Cancer Cell line, ideal for glioblastoma models	BW 124577
NCI-H460-Red-Fluc	Human Lung Cancer Cell line, ideal for orthotopic lung tumor models	BW 124316
K-562-Red-Fluc	Human Leukemia Cell line	BW 124735
BxPC3-Red-Fluc	Human Pancreatic Cancer Cell	BW 125058
MCF-7-Red-Fluc	Human Breast Cancer	BW 119262
A549-Red-Fluc	Human Lung Cancer	BW 119266
LL/2-Red-Fluc	Murine Lung Cancer	BW 119267
SKOV3-Red-Fluc	Human Ovarian Cancer	BW 119276

Bioware® Brite Ultra Green cell lines dual-labeled with enhanced Red-Fluc vector and Green Fluorescent Protein

Product	Product Description	Catalog Number
4T1-Red-Fluc-GFP	Murine Breast cancer cell line dual labeled with Luciferase and GFP	BW 128090
PC-3-Red-Fluc-GFP	Human Prostate cancer cell line dual labeled with Luciferase and GFP	BW 133416

LUMINESCENCE AGENTS

XenoLight Bioluminescent/Chemiluminescent Substrates

PerkinElmer offers bioluminescent substrates in two easy-to-use formats that fit your laboratory workflow for *in vivo* imaging.

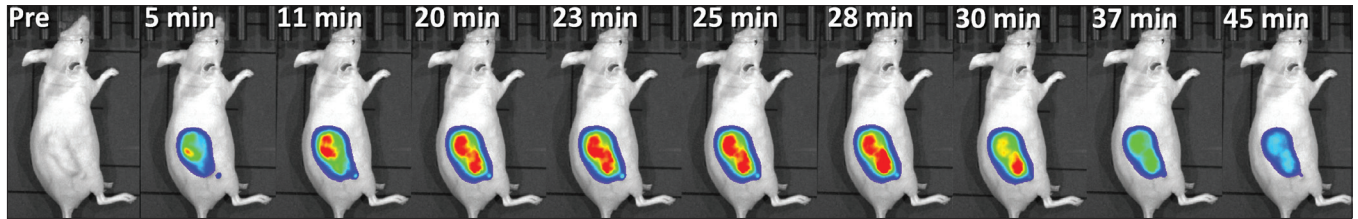
XenoLight RediJect substrates in pre-formulated, ready-to-use kits, reduce preparation time and effort, while still delivering ultimate sensitivity and reproducibility that is critical for accurate quantitation. Optimize your work flow patterns and obtain better results by minimizing batch-to-batch variation with batch controlled lots.

Also available is XenoLight RediJect Ultra, the same preformulation but with a rapidly clearing fluorescent dye to validate your substrate injection, and provide you with confidence in your data quality.

XenoLight D-Luciferin offers the same sensitivity and high performance in lyophilized form, available in gram and bulk quantities.

All PerkinElmer substrates have been optimized and validated in multiple biophotonic imaging applications including *in vivo* using the PerkinElmer IVIS® Imaging Systems.

Product	Product Description	Catalog Number
XenoLight RediJect D-Luciferin (50 injections)	Pre-formulated in PBS, batch controlled D-Luciferin (K+ salt) ready for <i>in vivo</i> use	770504
XenoLight RediJect D-Luciferin Ultra (50 injections)	Pre-formulated in PBS, batch controlled D-Luciferin (K+ salt) for <i>in vivo</i> use Includes a fluorescent marker to validate substrate injection	770505
XenoLight RediJect Coelenterazine h (50 injections)	Pre-formulated in PBS, batch controlled Coelenterazine h for <i>in vivo</i> use	760506
XenoLight RediJect Inflammation Probe, Explorer kit (5 injections)	Pre-formulated in PBS, chemiluminescent probe for monitoring inflammation	760535
XenoLight RediJect Inflammation Probe, Standard kit (20 injections)	Pre-formulated in PBS, chemiluminescent probe for monitoring inflammation	760536
XenoLight D-Luciferin (K+ Salt) (1 g)	Lyophilized bioluminescence substrate for <i>in vivo</i> imaging with Firefly Luciferase	122799



Kinetics of XenoLight® RediJect™ D-Luciferin bioluminescence imaging in a flank 4T1 mouse breast adenocarcinoma.

RediFect lentiviral particles

RediFect™ lentiviral particles are self-inactivating, recombination incompetent lentiviral particles carrying red-shifted firefly luciferase (*Luciola italica*) or green-shifted Renilla luciferase (*Renilla reniformis*)

transgene under control of the stable UbC promoter. Get rapid, stable and efficient transduction of a wide variety of mammalian cells including most cancer cell lines, primary, stem, and non-dividing cells.

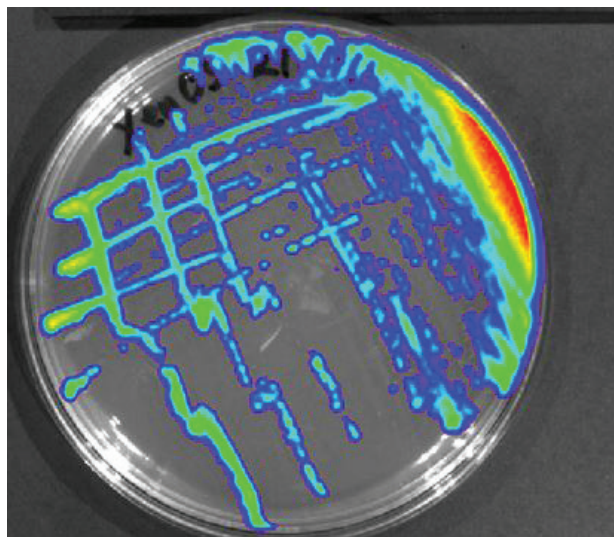
Product	Product Description	Catalog Number
RediFect Red-Fluc-Puromycin	Lentivirus particles containing red-shifted firefly luciferase with puromycin as selection marker	CLS960002
RediFect Red-Fluc-GFP	Lentivirus particles containing red-shifted firefly luciferase and Green Fluorescent Protein (GFP)	CLS960003
RediFect Green Renilla-Puromycin	Lentivirus particles containing Green Renilla luciferase with puromycin as selection marker	CLS960004

OPTICAL REPORTER MICROORGANISMS

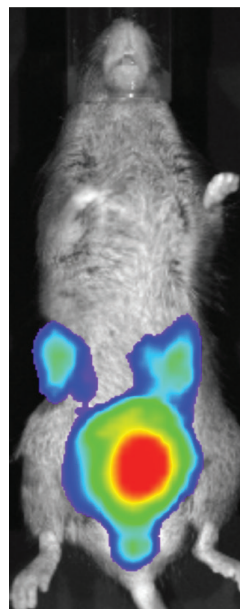
Optical *in vivo* imaging technology has been successfully used to non-invasively measure the spread of infection, monitor infection dynamics and determine the *in vivo* efficacy of antimicrobial compounds in various ID models. PerkinElmer offers various Gram positive and Gram negative bacteria labeled with bacterial Luciferase. One advantage of bacterial Luciferase is that it negates the use of an exogenous substrate like Luciferin.

Bacterium	Parental strain	Catalog No.
<i>E. coli</i>	EPEC WS2572 (Xen14)	119223
<i>L. monocytogenes</i>	ATCC 23074 (Xen19)	119237
	10403S (Serotype 1/2a wild-type strain) (Xen32)	119238
<i>P. aeruginosa</i>	ATCC 19660 (Xen5)	119228
	PAO1 (Xen41)	119229
<i>P. mirabilis</i>	ATCC 51286 (Xen44)	119236
<i>S. dysenteriae</i>	88A6205. Clinical isolate (Xen27)	119231

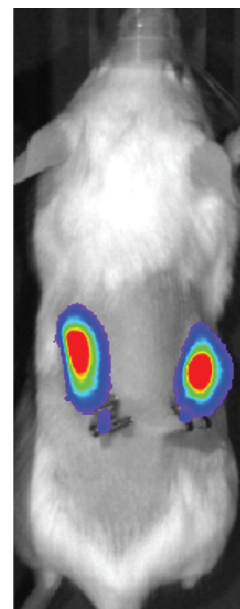
Bacterium	Parental strain	Catalog No.
<i>S. typhimurium</i>	FDA1189 (Xen33)	119235
<i>Y. enterocolitica</i>	91A1854 Clinical isolate (Xen24)	119232
	WS2589 (Xen25)	119233
<i>S. aureus</i>	8325-4 (Xen8.1)	119239
	ATCC 12600 (Xen29)	119240
	ATCC 33591 (Xen31)	119242
	ATCC 49525 (Xen36)	119243
	UAMS-1 (Xen40)	119244



Pseudomonas aeruginosa - Xen05 imaged on IVIS Spectrum.



Real time non-invasive imaging of *Proteus mirabilis* - Xen 44 migration of UTI infection from the bladder to the kidney. Imaged using IVIS Spectrum system.



Pseudomonas aeruginosa - Xen05 biofilm infection imaged on IVIS Spectrum.

Results. Smarter. Faster.

With a growing emphasis on translational insight, it is more important than ever to be able to examine the molecular mechanisms of disease and translate your *in vitro* models into *in vivo* results. PerkinElmer offers leading solutions and renowned expertise in assays, imaging and informatics that will help you bring it all together. Whether working in a well, cell or animal models large or small, now you can focus on your science, gain insight sooner, and succeed faster.

Learn more at www.perkinelmer.com/invivoreagents



PerkinElmer *in vivo* imaging agents are optimized for use in our suite of optical preclinical imaging systems.

PerkinElmer, Inc.
940 Winter Street
Waltham, MA 02451 USA
P: (800) 762-4000 or
(+1) 203-925-4602
www.perkinelmer.com



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