

VISQUE



POWER



CONNECTION



DOOR



ACQUISITION

VISQUE

InVivo Smart

VIEWWORKS

VISQUE

InVivo Smart



VISQUE® InVivo Smart is a preclinical *in vivo* fluorescence imaging and analysis system.

1

High-sensitivity
fluorescence image
acquisitions

2

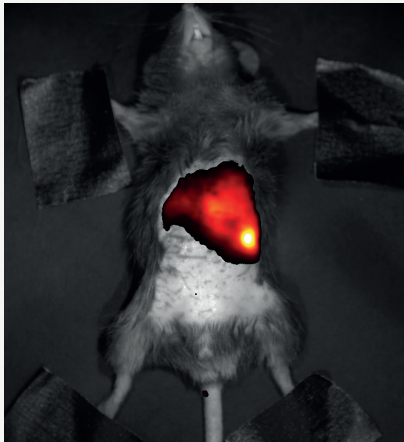
In vivo signal
detection & intelligent
image analysis
software: CleVue™

3

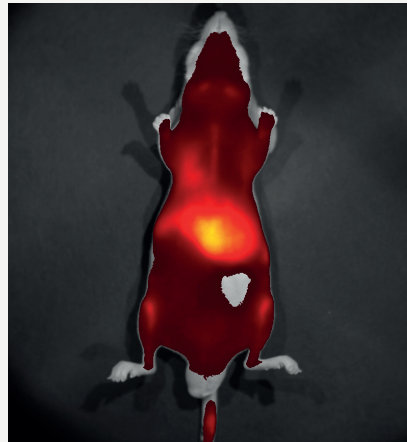
Sophisticated design
for enhancing the
usability

1

High-sensitivity fluorescence image acquisitions



C57BL/6 mouse image taken 1 hour after NIR fluorescent dye injection through the tail vein



Nude mouse image taken 2 days after NIR-labelled exosome injection through the tail vein



Scientific CMOS Camera

- Optimized solution for scientific applications
- Min. image pixel resolution: 20um (@7.5x)



High-sensitivity imaging sensor

- Quantum Efficiency: 72% at 595nm
- Dynamic Range: 87dB
- Dark Current: <math><10\text{ e}^-/\text{s}/\text{pix}</math> @ 30 °C

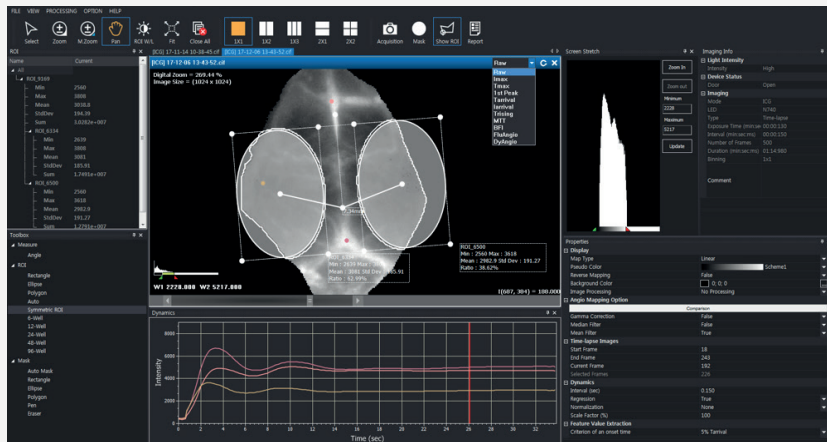


High-speed image acquisition (Max. 30fps)

- Uniform image quality in shooting high speed images

2

In vivo signal detection & intelligent image analysis software: CleVue™



Analysis of the Time-lapse images



Advanced kinetic analysis

- More than 10 patented algorithms for kinetic analysis of molecular diffusion phenomenon
- Kinetics visualization with feature maps
- Time-series kinetics graphs



Powerful spectrum and ROI analysis

- Spectral unmixing
 - autofluorescence signals removal
 - clear multichannel fluorescence imaging
- Merge of multi-spectral images
- Convenient ROI selection
 - auto, symmetric, shaped, well plate ROI selection



Academic writing support

- Report mode: one-page summary of data
 - analyzed image, color scale bar, ROI values, acquisition information, comments etc.

3

Sophisticated design for enhancing the usability



User-friendly product design

Simple to use design available for real-time fluorescence imaging immediately after preparation of small animals

- Open part of stage door
- Sliding stage and stage location marker
- Foot switch



Easy adjustment of lens (zoom, focus, and iris)

- Zoom: 1x ~ 7.5x



Compact design

- Lightweight design of 17kg (possible to hand-carry)
- Exterior LED display: Power, door status, shooting mode

Technical Specifications

System	
Dimension	40 cm x 40 cm x 57 cm
Weight	17 kg
Operating Temperature	10°C to 27°C
Power	100 – 240 V, 50/60 Hz, max. 0.5 A at 250 V AC

Camera	
Sensor	scientific CMOS
Resolution (H x V)	1024 x 1024
Pixel Size	6.5 µm
Min. Image Pixel Resolution	20 µm (7.5x)
Digital Output	14 bit
Maximum Frame Rate	30 fps
Exposure Time	0.013s to 3s
Detection Spectral Range	500 nm – 860 nm
Interface	USB 3.0

Lens	
Control	Zoom / Iris / Focus
Zoom (Field of View, H x V)	15 cm x 15 cm (1x) – 2 cm x 2 cm (7.5x)

Excitation Light	
Source	LED
White Light	epi white LED

Emission Filters	
Filter Selection	Automated Control
Emission Filters	1 included, 8 optional

Representative Detectable Fluorophores			
Imaging – Mode	Imaging – Light	Excitation / Emission	Fluorescent Dyes
GFP	Blue	Ex : 390nm – 490nm Em : 500nm – 550nm	GFP / EGFP / Alexa 488 / FITC / QD 525
PE	Green	Ex : 530nm – 570nm Em : 575nm – 640nm	RFP / DsRed / PE / Alexa 568 / TRITC / QD 585 / QD 605 / QD 625
Cy5.5	Red	Ex : 620nm – 650nm Em : 690nm – 740nm	Cy5.5 / PKE680 / Alexa 680 / Alexa 700 / QD 705
	HyperRed	Ex : 630nm – 680nm Em : 690nm – 740nm	
ICG	NIR	Ex : 740nm – 790nm Em : 810nm – 860nm	ICG / QD 800

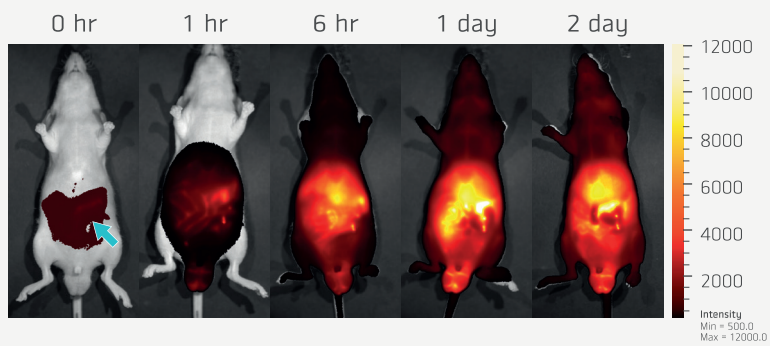
* Specifications are subject to change without prior notice.

Applications

In vivo Fluorescence Imaging

- Imaging solid tumors & tracking metastatic tumors
- Assessment of cardiovascular and/or Lymphatic structure and functions
- Evaluating the therapeutic efficacy of new drugs against cancer, arthritis, atherosclerosis, autoimmune disorders or angiogenesis etc.
- Analysis of the pharmacokinetics of new drugs

Pharmacokinetics study of exosomes labeled with NIR fluorescent dyes



- 0 hr: Taken immediately after IP injection of the Exosome-ICG complex.
- The Blue Arrow indicates the injection spot.



VIEWWORKS

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Smart-E201807