

NEO-LIVE™

Fluorescent Magnetic Nanoparticle for an *In Vivo* Live Image



Table 1. Contents and Storage information

Material	Wavelength	Concentration	Storage
NEO-LIVE™ Magnoxide 675	Ex/Em = 675/700 nm	2 mg/ml in borate buffer,	2-6 °C Do not freeze or dry
NEO-LIVE™ Magnoxide 730	Ex/Em = 730/754 nm		
NEO-LIVE™ Magnoxide 797	Ex/Em = 797/830 nm		

High sensitivity in small cell number

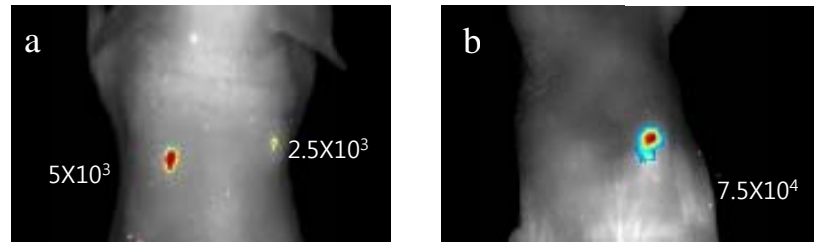


Figure 1. Even very small number of cells is available for detecting by using NEO-LIVE™

a) Subcutaneous injection (5×10^3 , 2.5×10^3 cells), b) liver injection (7.5×10^4 cells).

Deep tissue imaging

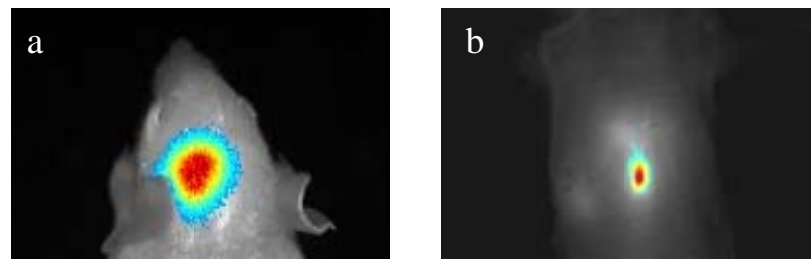


Figure 2. *In vivo* deep tissue imaging by using NEO-LIVE™

Cell labeled with NEO-LIVE™, was injected into brain (a), and spinal cord (b). In even deep tissue, fluorescence signal of NEO-LIVE™ is clearly detected.

Long term *In vivo* cell tracking

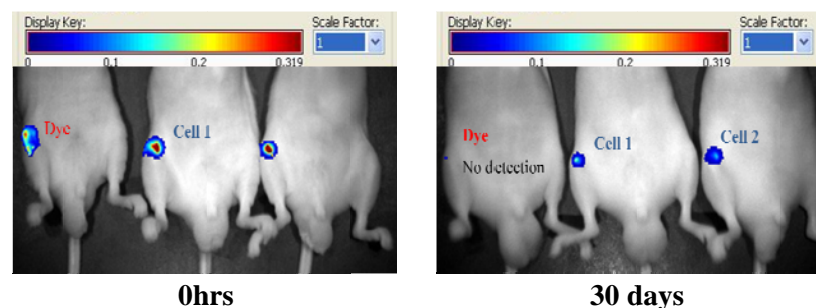


Figure 3. Long term *in vivo* cell tracking by using NEO-LIVE™

Chondrocyte cells labeled with NEO-LIVE™ were injected in articular capsule of nude mice. Fluorescence signal of cell was clearly detected after 30 days.

Available Instrument

Maestro™ (CRI), IVIS(Xenogen), In-Vivo F System (KODAK), etc.

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NEO-STEM™

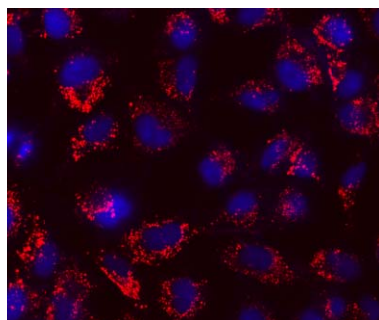
Fluorescent Magnetic Nanoparticle for a Cell Tracking



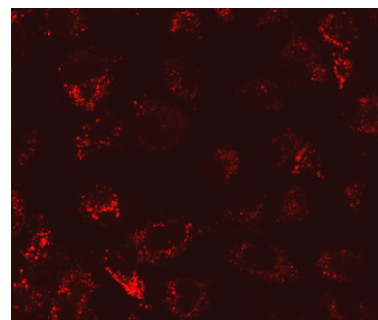
Table 1. Contents and Storage information

Material	Wavelength	Concentration	Storage
NEO-STEM™ TMSF	Ex/Em = 491/515 nm	2 mg/ml in borate buffer,	2-6 °C Do not freeze or dry
NEO-STEM™ TMSR	Ex/Em = 558/581 nm		
NEO-STEM™ TMSN	Ex/Em = 595/615 nm		

Photo stability



After 1min



After 30 min

Figure 1 Photo stability of NEO-STEM™

A549 cells labeled with both NEO-STEM™ and DAPI, was exposure under UV for 30 min. In contrast of DAPI, NEO-STEM™ shows a strong fluorescent signal (Red : NEO-STEM™, Blue : DAPI)

Long term cell tracking

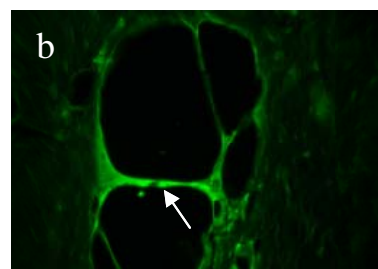
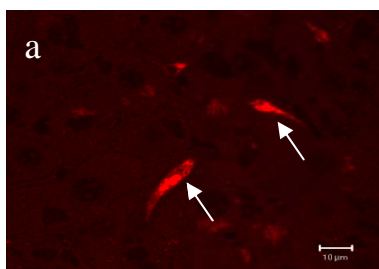


Figure 2. Long term cell tracking

a) hMSC labeled with NEO-STEM™ was detected in liver tissue after 7days.
b) Bone marrow derived stem cells labeled with NEO-STEM™ was detected in fracture site. We can also detect stem cells differentiated into osteoblast. You can observe cell migration, metastasis and differentiation by using NEO-STEM™

Conjugation with various biomolecules

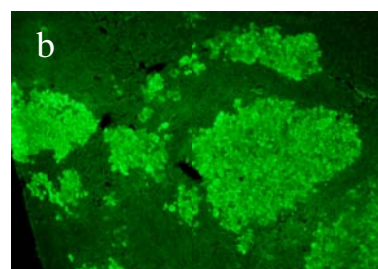
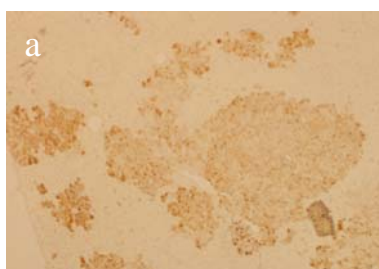


Figure 3. NEO-STEM™ conjugated with G-STP antibody

a) Positive control (DAB staining)
b) Immunohistochemistry image by NEO-STEM™ conjugated with G-STP antibody
NEO-STEM™ could be used in a number of biomedical applications such as targeting, bioimaging, cell sorting, and drug delivery.

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