PSA is one of the most studied biomarkers for Prostate Cancer. However, serum PSA levels are mildly elevated in both malignant and non-malignant prostate conditions. Enzymatically active PSA, present at detectable levels only in prostate tumor tissue, provides a better target to measure the malignancy of prostate cancer.

PSA 750 FAST™ is a unique type of activatable in vivo fluorescent agent that detects and quantifies PSA enzymatic activity at sites of prostate tumor growth.

- Detect and quantify active PSA non-invasively in vivo
- Selective against unbound and complexed PSA
- High Specificity for PSA+ tumors
- Validated on PerkinElmer’s comprehensive line of in vivo imaging systems

PSA 750 FAST™ has been validated on both the IVIS and the FMT platforms. Images above show clear targeting to PSA+ LNCaP tumors. Mice were injected with 2 nmoles of PSA agent and imaged 24 hours post injection.
(A) - In vivo imaging in PSA+ and PSA- tumors after injection of PSA 750 FAST™. Tumor-bearing nude Nu/Nu injected i.v. with 2 nmoles of agent and imaged 24 hours later. Four mice were implanted with either LNCaP (PSA+) or PC-3 (PSA-) cells. Images show concentration of the agent (pmoles) in tumor bearing mice. (B) - Chart on the top shows tumor fluorescence significantly higher in PSA+ LNCaP than in PSA- PC-3 tumors in vivo. Bottom graph shows a very good correlation between tumor signal and tumor size (C) - Enzyme biochemistry validation showing PSA 750 FAST™ is specifically cleaved by active PSA over inactive PSA (complexed with its inhibitor α1-antichymotrypsin), and other disease-relevant enzymes. (D) - Ex vivo validation of the specificity of PSA 750 FAST™ by microscopy. Complete blockage of fluorescent signal observed after pre-incubating tumor sections with the PSA natural inhibitor, α1-antichymotrypsin.

Validated and optimized for use on all PerkinElmer’s in vivo imaging systems

PerkinElmer in vivo imaging reagents are intended for animal research and not for use in humans. Learn more at www.perkinelmer.com/invivoreagents

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