Prions

High Sensitivity Detection of Diseased Prions

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Creatv markets the ultra-sensitive Signalyte™-II instrument, which is 10-100 fold more sensitive than fluorescent plate readers depending on the fluorescent dye. For the detection of prions, Signalyte™-II is 20 folds more sensitive than the plate reader.

An example used recombinant hamster prion protein (rPrP aa 23-231) that had been converted to the fibrillar β-sheet form. Concentrations of hamster PrP were incubated with 3 μM Thioflavin T (ThT), and fluorescence measured on a BMG FLUOstar Omega plate reader and Creatv's Signalyte-II™.

The data showed that as little as 10 nanograms (ng) of prion could be detected using Signalyte™-II compared to 200 ng using the plate reader.

Signalyte™-II is an ultra sensitive fluorescence detection platform for proteins, biomarkers, DNA, RNA, as well as cells, bacteria and viruses.

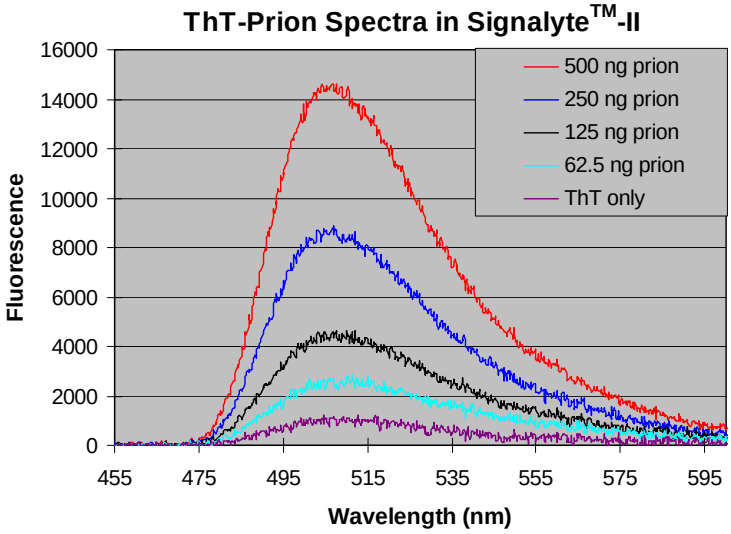

Figure 1. Fluorescent spectra of recombinant hamster PrP 23-231 with 3 μM ThT. Excitation was at 455 nm using an LED for 100 msec. Fluorescence was recorded using a 495 nm long pass filter.

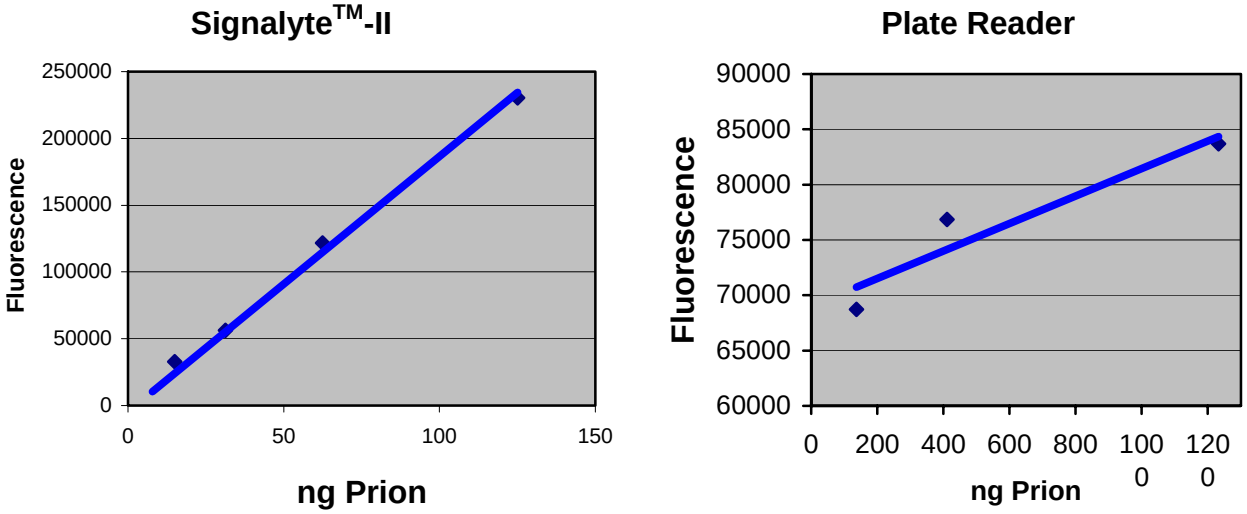

Figure 2. Titration of hamster PrP 23-231 in the presence of 3 μM ThT and detection with Signalyte™-II and BMG FLUOstar Omega. Excitation/emission filters were 470/515 nm for Signalyte™-II and 470/510 nm for the FLUOstar.

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