

ELISTAR HYPERNOVA

The brightest ECL substrate for your chemiluminescent immunoassay

Overview

ELISTAR HYPERNOVA is the brightest ECL substrate on the market for the detection of horseradish peroxidase (HRP) based immunoassay.

Based on a new proprietary technology, ELISTAR HYPERNOVA, with its extreme sensitivity and extraordinary light output, allows the detection of trace amounts of proteins.

The formulation provides a low background for an extremely high signal to noise ratio to enhance the accuracy of your CLIA test.

Maximize your sensitivity

When extreme sensitivity is critical to success, ELISTAR HYPERNOVA is the best choice to analyze limited or hard to detect protein samples. (Figure 1)

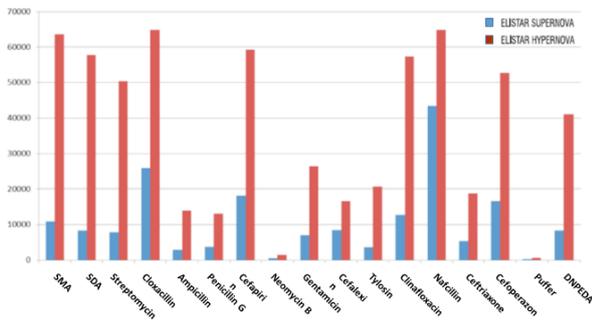


Figure 1. Outperforming sensitivity of ELISTAR HYPERNOVA in the monitoring of antibiotic residues in milk with the biosensor system MCR 3.

Data kindly provided by MPR Milchprüfung Bayern e V. (Bavarian association for raw milk testing).

Furthermore, ELISTAR HYPERNOVA with a negligible background has an exceptional signal to noise ratio, enabling a more precise interpretation of extremely low concentration of the analyte (Figure 2).

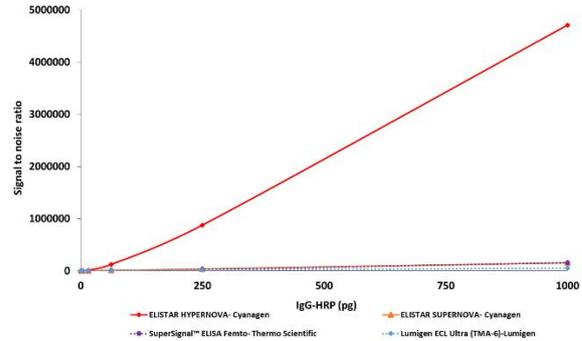


Figure 2. ELISTAR HYPERNOVA provides the highest signal to noise ratio in comparison to the top performer substrates.

Four-fold dilutions of IgG-HRP (from 1000 to 0,038 pg/well) were added to either 200 μ L of ELISTAR HYPERNOVA, ELISTAR SUPERNOVA, Supersignal™ ELISA Femto-Thermo Scientific or Lumigen ECL Ultra (TMA-6)-Lumigen. Data are the mean of at least six replicates. Reader: Victor3 microplate reader (Perkin Elmer).

Reduction in assay time and precious reagents

Chemiluminescence immunoassay is more sensitive than the conventional colorimetric method(s), providing for faster protocols and less reagent consumption.

ELISTAR HYPERNOVA generates a strong light output immediately, reaching the maximum signal intensity within one minute from the addition of the substrate, saving up time when compared to the most commonly used colorimetric assays or other chemiluminescent substrates.

A crucial point for optimal results relies on keeping the right probe concentration and saturating agents, for the lowest background as possible while maintaining a good signal.

ELISTAR HYPERNOVA takes advantage of using very low concentrations of antigens/antibodies to obtain an exceptional signal intensity with low background (Figure 3).

The dilution of antigen, primary and secondary antibodies must be much higher than ones used with conventional chromogenic detection systems or other ECL substrates, resulting in saving precious reagents while improving sensitivity.

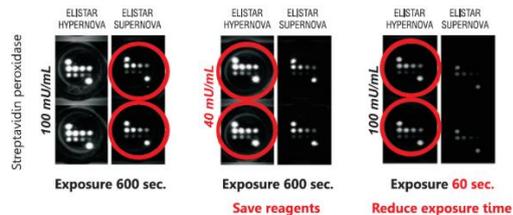


Figure 3. Microchip CLIA detection of biotinylated BSA.

ELISTAR HYPERNOVA produces a higher signal detected in a shorter time than ELISTAR SUPERNOVA and allows detecting a smaller amount of target protein with higher signal intensity. Data kindly provided by Seramun Diagnostica GmbH.

High lot-to-lot consistency

ELISTAR HYPERNOVA is formulated in order to assure negligible lot-to-lot variations, thus minimizing assay re-optimization and ensuring reproducibility.

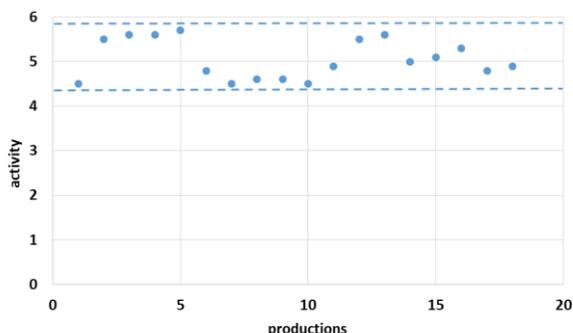


Figure 4. Lot-to-lot consistency of ELISTAR HYPERNOVA. Graph shows 18 different productions of ELISTAR HYPERNOVA. Coefficient of variation (CV) is less than 8%.

Storage at room temperature

ELISTAR HYPERNOVA has a 12 months shelf life when properly stored at room temperature.

Stable working solution

ELISTAR HYPERNOVA substrates have excellent working solution stability. The working solution is stable at + 4°C for at least three days, with a loss in signal intensity of less than 3%.

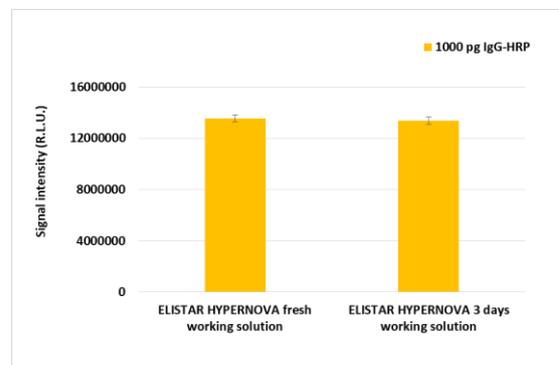


Figure 5. Working solution stability of ELISTAR HYPERNOVA.

200 µL of ELISTAR HYPERNOVA fresh working solution were added to a 96-well black plate. IgG-HRP at a concentration 1000 pg/well was added to each well and reading with Victor³ microplate reader (Perkin Elmer). The working solution was stored in an amber bottle at + 4°C and, after three days, was analyzed again. The decrease in signal intensity (R.L.U.) is less than 3%.

Conclusions

ELISTAR HYPERNOVA is the most powerful chemiluminescent substrate available to date for CLIA applications, allowing the detection of trace amounts of analytes. Thanks to its extreme signal intensity and sensitivity, ELISTAR HYPERNOVA enhances the accuracy of your immunoassay

ELISTAR HYPERNOVA is the best choice to detect minute amounts of proteins, using extremely diluted antibodies, thus saving precious samples and expensive primary antibodies. Furthermore, ELISTAR HYPERNOVA produces a strong signal in few seconds from the addition of the substrates. All these features makes ELISTAR HYPERNOVA ideal for high throughput applications.