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SINGLE-STEP ANTI-TNF DRUG MONTIORING

DIAGNOSTICS

Immunoassay platform for single-step detection of analytes in biological fluids for rapid monitoring of antigens, antibodies, and therapeutic drugs.

TECHNOLOGY TYPE

Platform Method
Antibody
Assay Platforms

STAGE OF DEVELOPMENT

Verified with clinical samples.

IP PROTECTION

U.S. Utility Patent Pending
Target-Binding Activated Split Reporter Systems for Analyte Detection and Related Components and Methods
US20180172692A1

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Reference Number: U-5861

Aaron Duffy
Technology Manager
aaron.duffy@tvc.utah.edu
801-585-1377

TECHNOLOGY SUMMARY

Anti-TNF (tumor necrosis factor) therapeutics are top-grossing drugs that are a major treatment advancement for inflammatory diseases such as rheumatoid arthritis, inflammatory bowel disease, and Crohn's disease. Patient blood levels of TNF blockers need routine monitoring to ensure effective therapeutic response and patient safety. The current clinical test for TNF blockers is expensive and time-consuming, requiring cell culturing.

University of Utah researchers have developed an immunoassay platform with customized antibody detection reagents that enables one-step anti-TNF drug monitoring. The immunoassay provides a fluorimetric readout in less than an hour.

FEATURES AND BENEFITS

- Offers high detection limits of 0.05 to 35,000 ng/ml.
- Provides small sample size requirements and can use low-cost reagents.
- Low-cost plate readers.
- Offers high-throughput capabilities.
- Customizable for detection of any protein-peptide analyte.

RECENT PUBLICATIONS

Dixon, A. S., Kim, S. J., Baumgartner, B. K., Krippner, S., & Owen, S. C. (2017). A Tri-part Protein Complementation System Using Antibody-Small Peptide Fusions Enables Homogeneous Immunoassays. *Scientific Reports, 7*(1). doi: 10.1038/s41598-017-07569-y

INVENTOR PROFILE

Shawn C. Owen, Ph.D., Assistant Professor – Pharmaceutical Chemistry
Andrew S. Dixon, Ph.D., Research Assistant Professor – Pharmaceutics and Pharmaceutical Chemistry

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