Confluence
DISCOVERY TECHNOLOGIES
An Aclaris Therapeutics Company

TECHNICAL BRIEF
MSD® - Meso Scale Discovery

The Meso Scale Discovery (MSD®) platform provides a faster alternative to traditional ELISAs for performing sandwich immunoassays. The MSD® assay platform utilizes Ruthenium (II) tris-bipyridine-(4-methylsulfone) [Ru(bpy)3] that, once conjugated to the analyte, serves as the tracer in competitive assays. The Ru(bpy)3-based tag undergoes a rapid redox reaction that emits light in the presence of an applied voltage. Assay kits for several eicosanoids have been adapted to the MSD® platform. The Confluence Discovery Technologies (Confluence) team has access to dozens of kits available across therapeutic areas. An optimized MSD® electrochemiluminescent assay can quantitate host cell proteins with a simple protocol few wash steps and low cost.

The MSD® assay offers several technical advantages as an assay platform:

- Capture: 10-100 fold increase compared to ELISA
- Dynamic Range: 3-4 log vs. 1-1.5 log range for ELISA
- Sensitivity: Detection of analytes at sub-picogram levels
- Reduced Sample Volume: 5-25 µl volume vs. 50-100 µl for ELISA
- Speed: The entire assay can be performed in 3 hours
- Multiplex Capability: Simultaneous measurements for up to 10 analytes

Applications

Signal transduction path way evaluation

Applications

The Confluence team has a wide range of experience in developing and validating MSD® assays to suit many different requirements. Our highly trained and knowledgeable scientists will assist with experimental design to develop and validate assays to meet client-specified criteria. We also perform data analysis and interpretation of MSD® data to enable our clients to obtain the best insights from large, complex data outputs.

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