Biophysical Assays

Pharmaron provides biophysical assays across multiple modalities: in-depth characterization of protein quality, binding kinetics and binding stoichiometry between target protein and ligand molecule using a wide range of technologies. We support both integrated drug discovery and stand-alone projects, and we specialize in developing bespoke assays to help determine the mechanism of action. Our extensive biophysical capabilities have applications in small and large molecule drug discovery programs.

Technologies

- SPR-8K,8K+
- SPR-S200
- BLI
- MST
- ITC
- NanoDSF
- TSA
- LC/MS

Services

Characterization

- Protein stability, thermal protein unfolding & melting temperature studies
- Protein quality assessment (aggregation assessment)
- Thermal stability analysis for therapeutic antibody candidates
- Rapid assessment of the buffer conditions for screening

Binding interactions

- Fragment/compound and antibody screening and in-depth characterization
- Molecular interactions measured in real-time (kinetics)
- Binding assays and affinity measurements in solution
- Simultaneous binding measurements against three targets
- Yes-No binding studies: Tm stabilization/destabilization caused by a ligand molecule
- Customized assay design for mechanism of action studies
- Binary and tertiary complex characterization (bifunctional degraders)
- Molecular glue assays
- Develop Western blot or plate-based TSA (cellular and *in vitro*)

Capabilities

- Fast, low volume, label and label-free methodologies
- Suitable for intrinsically fluorescent targets
- Suitable for targets with low expression level or unstable proteins
- Explore the binding under cellular context

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