evotec

#RESEARCHNEVERSTOPS

Quantitative proteomics for target deconvolution and selectivity profiling

- Pioneered chemical proteomic applications supporting target deconvolution of bioactive compounds emerging from phenotypic screens
- Target selectivity profiling enabling further drug optimisation and development
- Evotec Cellular Target Profiling™ – unbiased, proteome-wide target deconvolution and selectivity profiling to identify and quantify compound interactions with cellular on- and off-targets
- Photoaffinity labelling coupled to MS – covalent target capture in live cells to identify target proteins and visualise compound-target interactions

Areas of expertise

Chemical proteomics for target deconvolution, drug selectivity and activity profiling

Global proteome expression and PTM analysis

Biomarker discovery and validation

Metabolomics

Statistics and bioinformatics analysis

Contact our experts

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- Evotec's chemical proteomic approach uses high-end quantitative mass spectrometry to reveal and verify specific cellular targets
- Unbiased target ID by proteome-wide profiling of native, endogenously expressed, post-translationally modified proteins in the presence of cellular co-factors and native complex partners
- Evotec Cellular Target Profiling™ identifies drug targets and determines target-specific dissociation constants for the compound studied, ranking targets according to their likely physiological relevance
- Drug photoaffinity labelling allows identification of target proteins, localisation of drug-target interaction in cells using fluorescence microscopy and binding site identification in protein targets and complexes
- Complementary chemical proteomic approaches can be performed in an integrated fashion
- Extensive, non-target class restricted track record in successful profiling of diverse small molecule compounds
- Activity-Based Protein Profile (ABPP) of a wide range of enzyme classes including serine hydrolases, metalloproteases, oxidoreductases, histone deacetylases, and glutathione S-transferases
- KinAffinity® as Evotec's hit-to-lead compatible approach for rapid target profiling of kinase inhibitors in cell and tissue samples. Unlike transitional biochemical kinase panel screenings, the inhibitors' target affinities are determined simultaneously for a large number of native kinases within their physiological cellular environment. KinAffinity® is applicable for type I and II kinase inhibitors