LifeSensors

from genomics to proteomics

Ubiquitin Discovery Research Services

DUBs | Ligases | Microarrays

LifeSensors carries an extensive array of deubiquitylases (DUBs), ubiquitin-like proteins (UBLs), isopeptidase assay technologies, antibodies, and ubiquitin conjugation enzymes. In order to capitalize on these products and speed your research, we now offer a number of custom services aimed at revolutionizing your research.

These include:

- Isopeptidase assay development
- Ligase assay development
- E2 profiling
- E3 ligase substrate identification
- DUB linkage-type specificity profiling
- DUB substrate identification

These services primarily utilize protein microarrays for near-genome wide, high throughput characterization using minimal amounts of your precious reagents. Contact us today to find out how we can contribute to the next phase of your research.

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LifeSensors, Inc. | 271 Great Valley Parkway | Malvern, PA 19355 | 610.644.8845 | www.lifesensors.com

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Contact Us
To Learn More:
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To order, please call
610-644-8845 or visit
www.lifesensors.com

Isopeptidase assay development:

LifeSensors has extensive experience in the development of DUB substrates and assays ranging from our CHOP-reporter technology, to development of traditional and novel C-terminal hydrolase substrates (Ub-AMC, Ub-Rho, Ub-Luc), to our recently introduced IQF-DiUb™ isopeptidase substrates. We will work with you to develop and optimize these technologies to provide the optimum assay for your DUB.

Ligase assay development:

LifeSensors has co-developed a homogeneous TR-FRET assay for the measurement of E3 ligase activity. We offer customization of this assay to build the high throughput screening assay that you need for lead discovery in this rapidly growing field.

E2 profiling:

Using our TR-FRET E3 ligase assay, we can rapidly determine the best E2(s) for your E3.

E3 ligase substrate identification:

Utilizing microarray based proteomics, LifeSensors has identified high confidence leads for substrates of the E3 Praja. Within one week, we can provide a similar list for your E3 of choice from over 10,000 possible human protein substrates. Prior E2 optimization is not necessary- we can identify the best E2 from among 24 different purified and active human E2's.

DUB substrate identification:

Using a promiscuous E2 (UbcH5c) and a cocktail of E3's, we have demonstrated the ability to "fully" ubiquitylate microarrayed protein substrates, then treat the array with a purified DUB to identify which ubiquitylated proteins are substrates for the DUB. Using a variety of single lysine ubiquitin mutants, we can also construct polyubiquitin chains on these arrays in order to examine linkage specificity of DUB action.

All microarray-based services include your choice of microarray; E2 and E3, or DUB; and ubiquitin (WT and all seven single lysine mutants available).

Our proprietary substrates and technologies are in part licensed from Progenra, Inc., a leader in ubiquitin proteasome pathway (UPP) drug discovery. *www.progenra.com*