Addressing the interactome with protein-protein assays

A SELECTION OF HTRF ASSAYS FOR PPI IN SCIENTIFIC LITERATURE
Harnessing the protein-protein interaction biology

It is estimated that the human interactome covers approximately 400,000 protein-protein interactions (PPI). Regardless of the therapeutic area, understanding and modulating biomolecular complexes is one of the leading challenges for discovering innovative drugs such as biologics and small molecules.

Over the past several years, researchers have developed an extraordinary diversity of add & read assays with Cisbio HTRF reagents, including anti-tags, anti-species, Streptavidin, affinity tools, and PPI buffers.

This brochure is intended to reflect PPI versatility by showing six different examples taken from published papers. The possibilities are truly unlimited. Our next example could be yours!

- Unlimited target configurations
- Straightforward add-and-read assays
- Comprehensive line of ready-to-use reagents & buffers
- Technical guide to facilitate the transition to HTRF

How to set up my assay?

www.cisbio.com
Glycohydrolase assay: Poly ADP ribose-PARP cleavage

The context and why it is interesting:
- Post-translational modulator screening
- Addresses drug resistance mechanisms
- Program for oncology

Human Rhinovirus blockade assay

The context and why it is interesting:
- Virus/Intercellular Adhesion Molecule (ICAM) inhibitor screening
- Multi-site avidity binding assay
- Program for Chronic Obstructive Pulmonary Disorder (COPD)
The context and why it is interesting:

- Study of pre-mRNA splicing defects in Fragile X-associated Tremor Ataxia Syndrome (FTAX)
- Focus on loss-of-function action mechanism
- Program for neurological disorders

**Identified binders**

<table>
<thead>
<tr>
<th>Identified binders</th>
<th>1a</th>
<th>1b</th>
<th>1c</th>
<th>1d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage displacement at 25µM</td>
<td>85 ± 1</td>
<td>91 ± 5</td>
<td>96 ± 9</td>
<td>87 ± 5</td>
</tr>
<tr>
<td>IC₅₀, µM</td>
<td>13 ± 0.4</td>
<td>8 ± 0.3</td>
<td>13 ± 0.2</td>
<td>7 ± 0.2</td>
</tr>
<tr>
<td>Kd, nM</td>
<td>78 ± 4</td>
<td>38 ± 1</td>
<td>69 ± 5</td>
<td>50 ± 18</td>
</tr>
</tbody>
</table>

**Receptor-Ligand: VEGFR/PIGF1,2 binding assay**

The context and why it is interesting:

- Identification of Anti human PIGF-1,2 blocking antibody
- Compatible with crude periplasmic extracts
- Biologics drug screening
NED1 protease assay

The context and why it is interesting:
- Protein stability regulation related to proteasomal degradation
- Pivotal role in cell cycle progression and embryogenesis
- Program for cancer

Antibody epitope mapping: CXCL13 case study

The context and why it is interesting:
- Therapeutic antibody lead optimization programs
- Biologics epitope mapping and affinity maturation
- Bio-similar and bio-better drug development
For more information, or to discuss your specific labeling and custom protein-protein assay requirements, please contact your local Cisbio representative or visit www.cisbio.com

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