

# OTI

## A Collaborative Research Enablement Program

Advancing understanding of protein  
behavior in living cells

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# Why OTI?

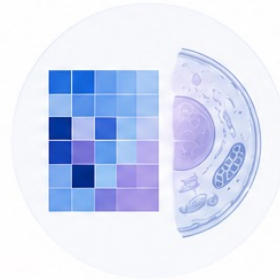
Accelerate foundational biology and translational insight through  
**MICRO-TAG<sup>®</sup> reagents**

## KEY APPLICATIONS



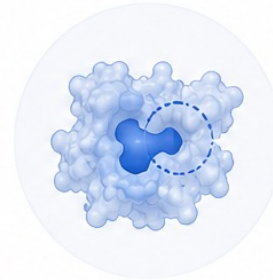
### 1. Target Validation

Confirm target expression, engagement, and functional relevance in a native cellular context.



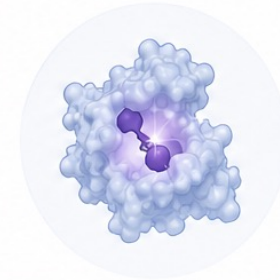
### 2. Target Proteomic Response

Define cellular protein stability and network-level responses across a temperature series.



### 3. Target Druggability

Assess biophysical properties and conformational plasticity to prioritize tractable targets.



### 4. Drug-Target Engagement

Quantify compound-induced stabilization or destabilization to confirm on-target engagement in cells.



OTI enables high-quality, real-time cellular data to drive better biology, smarter decisions, and faster scientific progress.

# What is MICRO-TAG<sup>®</sup>

Real-time measurement of protein behavior in living cells using **temperature-series profiling**.



## REAL-TIME

Monitors target engagement and protein stability in real time.



## TEMPERATURE-SERIES PROFILING

Captures cellular thermal responses across a precise temperature gradient



## IN-CELL CONTEXT

Measures proteins in their native cellular environment



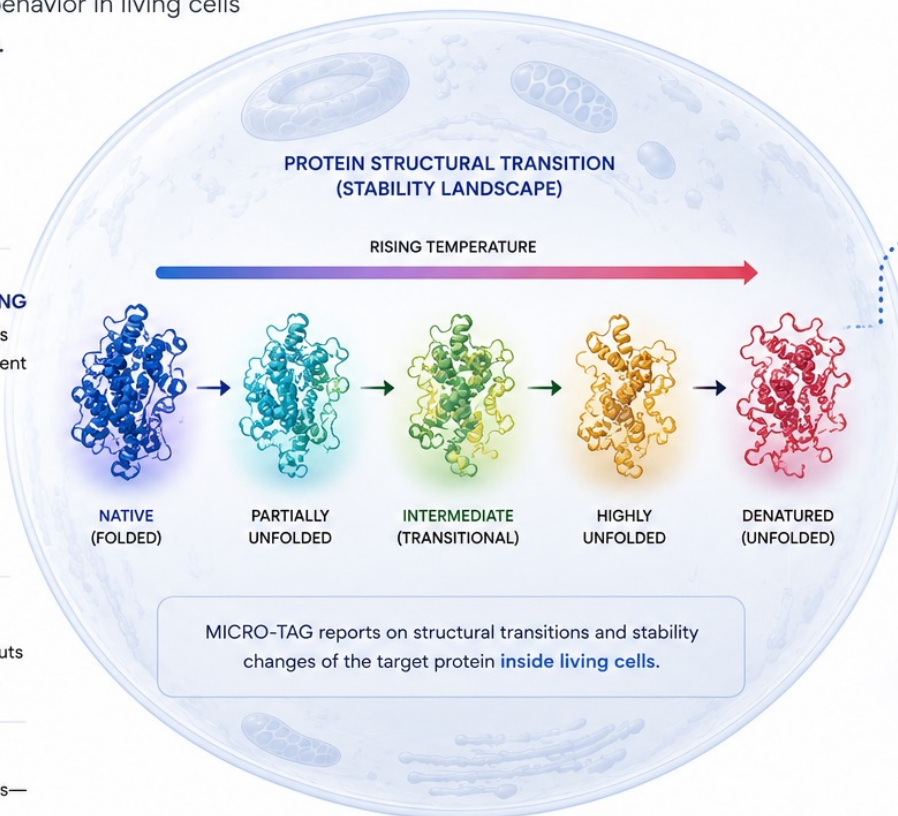
## QUANTITATIVE & SENSITIVE

Provides robust, quantitative readouts of target stability or destabilization.



## qPCR COMPATIBLE

Runs on standard qPCR instruments—no specialized equipment required



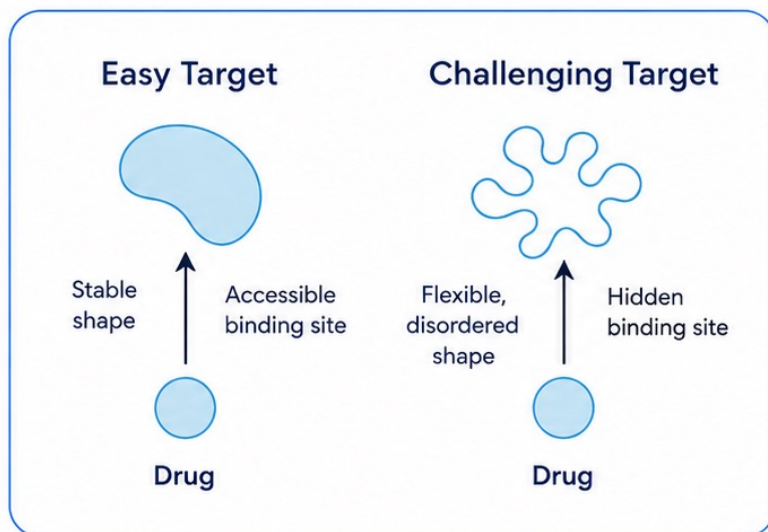
Real-time readout of protein stability across the temperature series.



MICRO-TAG<sup>®</sup> enables real-time discovery of how targets behave, respond, and can be modulated in **living cells**.

# INTERROGATE CHALLENGING DRUG TARGETS

New cellular biophysical method desired for challenging drug targets.

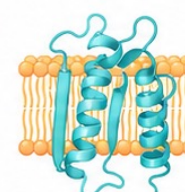


## TRANSCRIPTION FACTORS



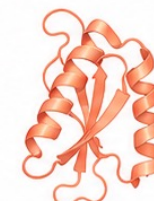
cMYC

## MEMBRANE PROTEINS



GPR75

## ENZYMES



KRAS

## COMMON FEATURES

- Lack of well-defined pockets
- Complex interactions
- Intrinsic disorder
- Complex interactions
- Intrinsic disorder
- Highly conserved active sites
- Lack of 3D structure outside of the cell



OTI empowers researchers to map **real-time target behavior** in native cellular contexts—revealing **hidden states** and **actionable insights** for challenging drug targets.



Capture dynamic behavior



Reveal hidden binding opportunities



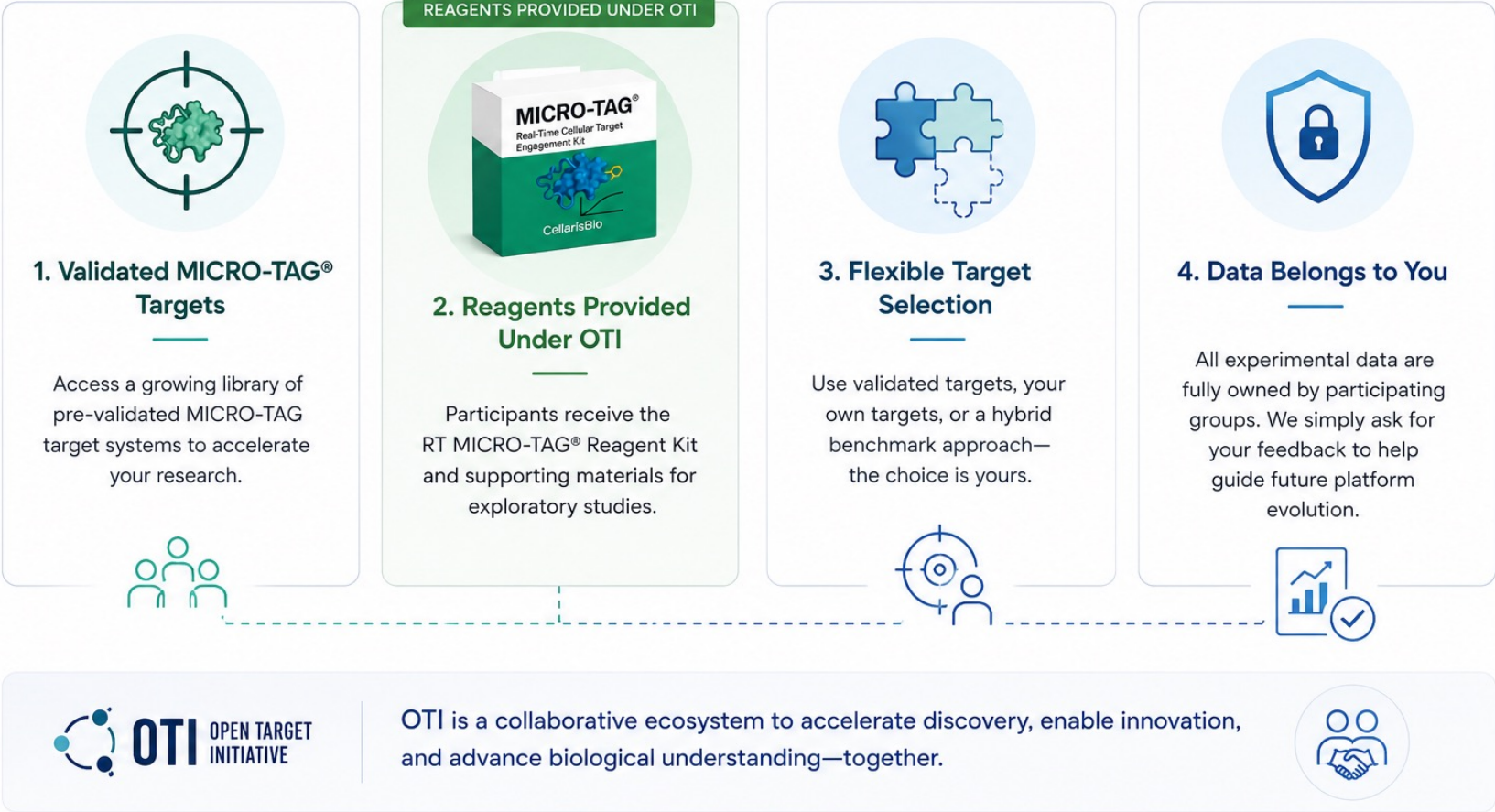
Inform better target prioritization



Advance discovery with confidence

# OTI Program Principles

A collaborative research enablement program built on access, flexibility, and partnership.



# Flexible Participation Framework

OTI is designed to fit your research goals—choose the pathway that works best for you.



Designed to minimize onboarding friction while supporting scalable target expansion.



All OTI participants receive **RT MICRO-TAG® Reagent Kit** and supporting materials.



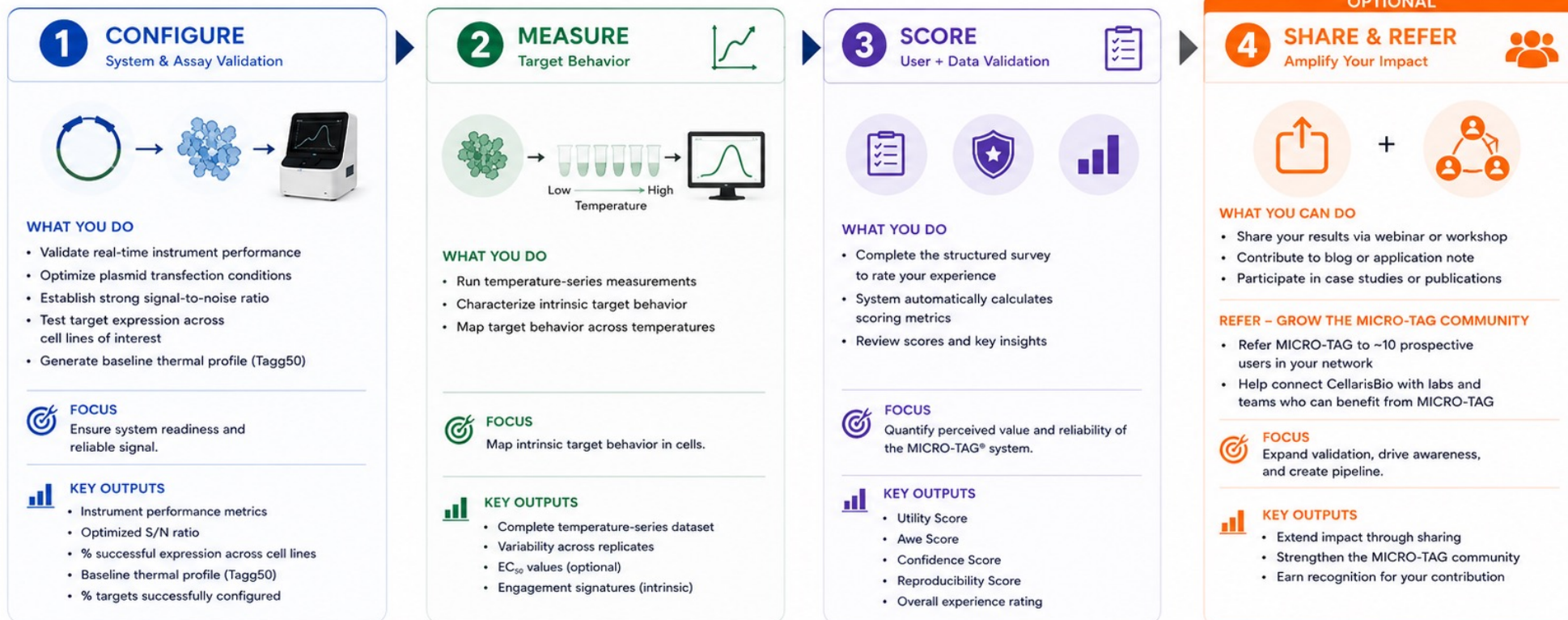
- ✓ Ready-to-use reagents for real-time cellular measurements
- ✓ Optimized for temperature-series profiling in living cells
- ✓ Compatible with standard qPCR instruments



All experimental data are fully owned by participating groups. We simply ask for your feedback to help guide future OTI workflows and platform development.

# OTI USER WORKFLOW

A simple, structured path to generate high-quality data and drive meaningful insights.



Your data is yours. Share feedback with us to help shape the future of MICRO-TAG.

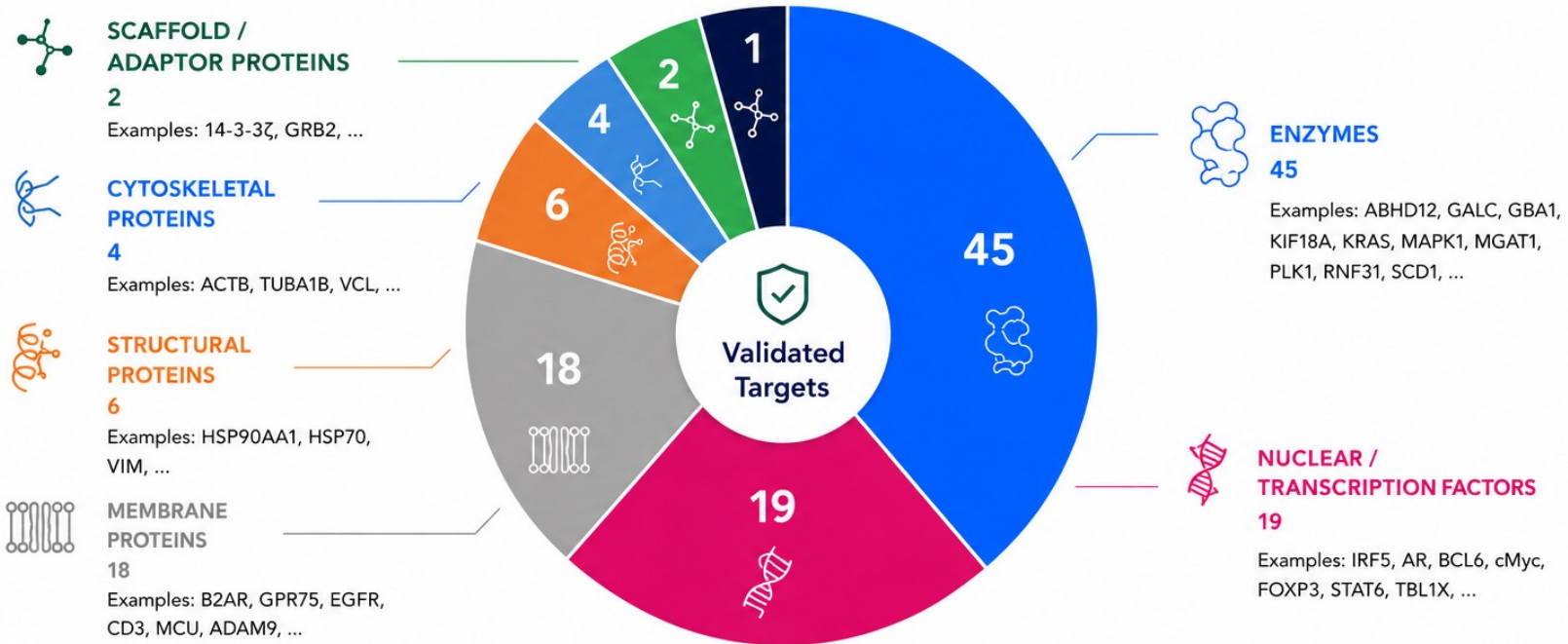
# APPLICATIONS OF OTI

Accelerate foundational biology and therapeutic insight



# VALIDATED TARGETS FOR MICRO-TAG<sup>®</sup>

Broad, diverse, and rigorously validated across protein classes and biological functions

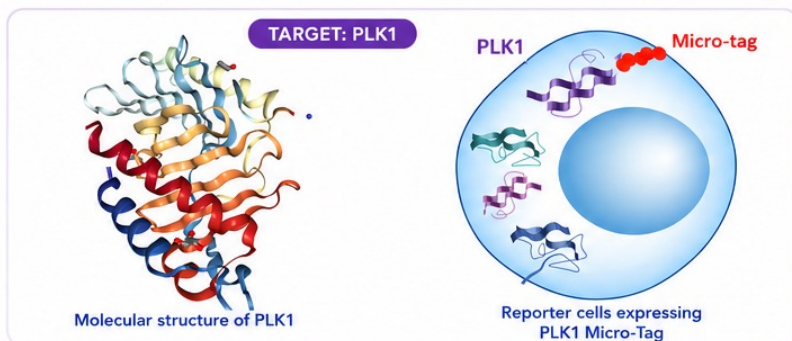


<p><b>DIVERSE COVERAGE</b> Enzymes, nuclear / TFs, membrane, structural, cytoskeletal, scaffold / adaptor, and more.</p>	<p><b>RIGOROUS VALIDATION</b> Each target validated for expression, assay performance, and reproducibility across cell models.</p>	<p><b>BROAD RELEVANCE</b> Includes validated targets across key disease areas and therapeutic modalities.</p>	<p><b>REAL-TIME INSIGHT</b> Capture dynamic target behavior and drug engagement in living cells.</p>	<p><b>BUILT FOR DISCOVERY</b> Empowering confident decisions from target validation to drug development.</p>
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Continuously expanding library to support emerging biology and new therapeutic opportunities.

# REPRESENTATIVE OUTPUTS

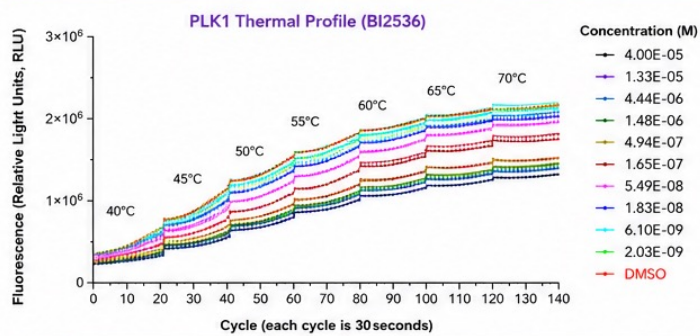
## Real-time target engagement in living cells: PLK1



MICRO-TAG® enables real-time quantification of PLK1 target engagement in living cells.

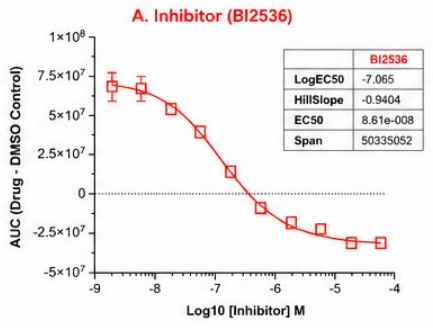
- ✓ Thermal profiling across a temperature series
- ✓ Dose-response to quantify compound potency
- ✓ Detects both inhibition and stabilization mechanisms

### 1. THERMAL SHIFT (TARGET STABILITY)

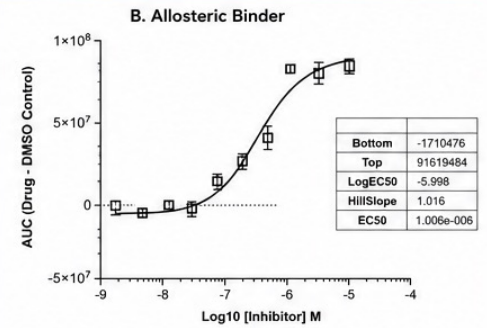


Temperature step increases reveal compound-dependent stabilization of PLK1, indicating target engagement.

### 2. DOSE-RESPONSE (TARGET ENGAGEMENT)



BI2536 inhibits PLK1 with an EC50 of 86 nM.

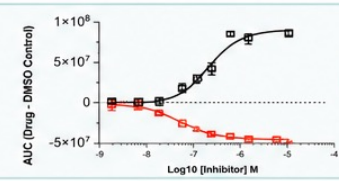


Allosteric binder stabilizes PLK1 with an EC50 of 1.0 µM.



**COMPARATIVE SUMMARY**  
MICRO-TAG® differentiates mechanisms and quantifies potency in living cells.

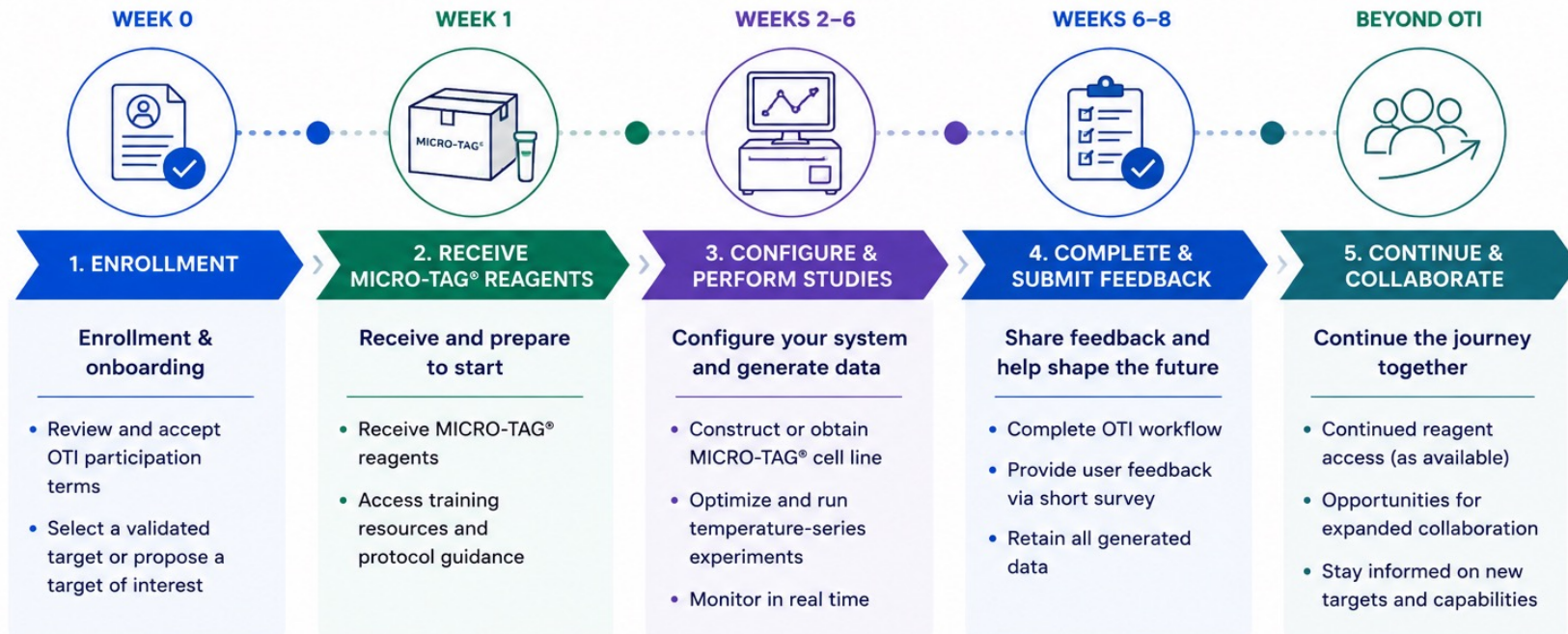
- ☐ Allosteric binder (stabilization)  
EC50 = 1.0 µM
- ☐ BI2536 (inhibition)  
EC50 = 86 nM



MICRO-TAG® delivers quantitative, real-time insights into target engagement for smarter discovery.

# OTI PARTICIPATION PROCESS

A simple, guided process to generate real insights—fast.



**TYPICAL PARTICIPATION WINDOW:**  
~2 MONTHS



Most OTI studies can be completed within approximately 2 months.



**YOUR DATA IS YOURS TO KEEP.** We simply ask for feedback to help guide future MICRO-TAG® development and support the scientific community.



**MICRO-TAG.**

# THANK YOU. TOGETHER, WE ADVANCE DISCOVERY.

OTI accelerates foundational biology and therapeutic insight by enabling real-time understanding of challenging drug targets in their native cellular environment.



## CHALLENGING TARGETS

Probe the undruggable—  
intrinsically disordered,  
membrane, and more.



## REAL-TIME, QUANTITATIVE INSIGHTS

Capture dynamic target  
behavior and drug  
engagement in living cells.



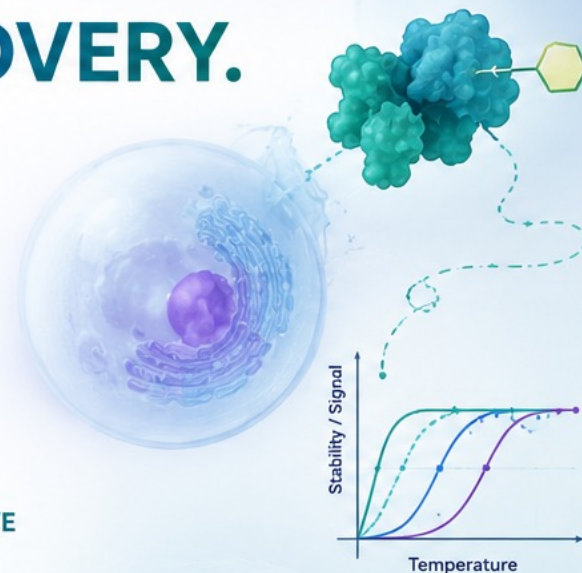
## VALIDATED. DIVERSE. RELEVANT.

A growing library of  
validated targets across  
key biology and disease areas.



## COLLABORATIVE IMPACT

Your data informs future  
reagents, driving the field  
forward together.



## JOIN OTI. MAKE AN IMPACT. SHAPE WHAT'S NEXT.

Together, we can unlock new biology and create better therapies.