

PD-1/PD-L1

OX40/OX40L

CTLA-4/B7-1

## Inhibitor Screening Assay Kits

**Aurora Biolabs LLC**  
7270 Trade St. Ste. 103  
San Diego, CA 92121  
Tel: 858-215-4510



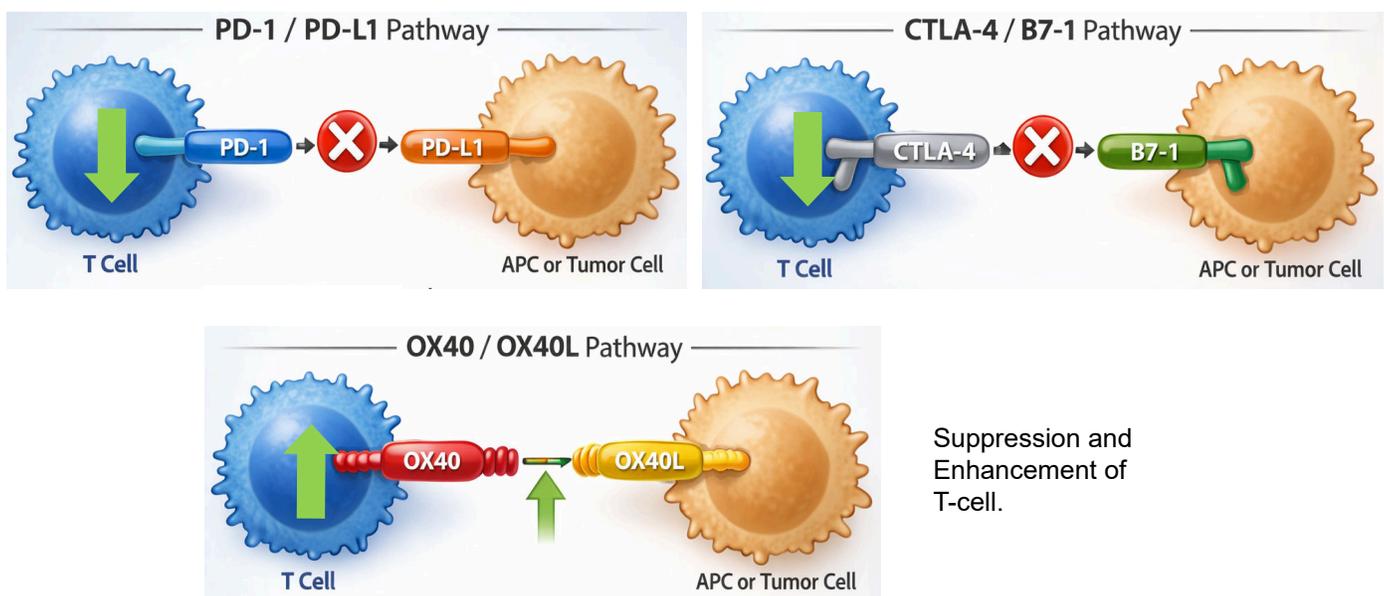
# Why PD-1/PD-L1, OX40/OX40-L, and CTLA-4/B7-1?

Cancer cells can evade immune surveillance by exploiting regulatory pathways that control T-cell activation and function. Among the most important targets in cancer immunology are the PD-1/PD-L1, CTLA-4/B7-1, and OX40/OX40L pathways, which play central roles in shaping antitumor immune responses.

PD-1/PD-L1 and CTLA-4/B7-1 are inhibitory immune checkpoint pathways that suppress T-cell activity and promote immune tolerance within the tumor microenvironment. Tumors frequently upregulate these pathways to escape immune destruction, making them key targets for immune checkpoint inhibitors that have transformed cancer treatment.

In contrast, the OX40/OX40L pathway provides a costimulatory signal that enhances T-cell expansion, survival, and effector function. Activation of OX40 signaling can strengthen antitumor immunity and counteract immunosuppression, particularly when combined with checkpoint blockade.

Together, these pathways are critical regulators of immune responses in cancer and represent major therapeutic targets driving advances in cancer immunotherapy. Aurora Biolabs PD-1/PD-L1, OX40/OX40L, and CTLA-4/B7-1 are TR-FRET based assays designed for high-throughput screening of inhibitors that prevent the binding of target protein and its ligand. The binding of the target protein and its ligand brings Terbium and fluorophore into close proximity, allowing fluorescence resonance energy transfer upon activation. Inhibitors binding to the target protein results in no energy transfer, and thus low fluorescence signals.



# Why Choose Aurora Biolabs TR-FRET Inhibitor Screening Assay Kits?

## Proven Convenience

- All reagents & rxn plate included.

Components			
Catalog number	Item	Amount	Storage
234822-B	Assay buffer	25 mL	-20°C
237353	Recombinant human Tag6-PD-1	60 µL	-80°C
237354	Recombinant human Tag7-PD-1L	5 µL	-80°C
728526	Terbium-labeled anti-Tag6 antibody	20 µL	-80°C
432322	fluorescence-labeled anti-Tag7 antibody	40 µL	-80°C
	384-well microplate, White	1	Room temperature

Components			
Catalog number	Item	Amount	Storage
2369402	Assay buffer	25 mL	-20°C
2369403	Recombinant human Tag6-OX40	20 µL	-80°C
2369404	Recombinant human Tag7-OX40L	5 µL	-80°C
728526	Terbium-labeled anti-Tag6 antibody	20 µL	-80°C
432322	fluorescence-labeled anti-Tag7 antibody	20 µL	-80°C
	384-well microplate, White	1	Room temperature

## Proven Procedure

- Optimized step-by-step protocols provided.

Protocol Summary			
Component	Negative Control	Positive Control	Inhibitor Test
1X buffer	4 µL		
PD-1 protein		4 µL	4 µL
Inhibitor solvent	2 µL	2 µL	
Inhibitor solution			2 µL
<b>Subtotal Volume</b>	<b>6 µL</b>	<b>6 µL</b>	<b>6 µL</b>
Incubate at room temperature for 30 minutes.			
PD-L1 protein	4 µL	4 µL	4 µL
Dye solution	10 µL	10 µL	10 µL
<b>Total Volume</b>	<b>20 µL</b>	<b>20 µL</b>	<b>20 µL</b>
Incubate at room temperature for 1 hour.			
OX40 protein		4 µL	4 µL
Inhibitor solvent	2 µL	2 µL	
Inhibitor solution			2 µL
<b>Subtotal Volume</b>	<b>6 µL</b>	<b>6 µL</b>	<b>6 µL</b>
Incubate at room temperature for 30 minutes.			
OX40L protein	4 µL	4 µL	4 µL
Dye solution	10 µL	10 µL	10 µL
<b>Total Volume</b>	<b>20 µL</b>	<b>20 µL</b>	<b>20 µL</b>
Incubate at room temperature for 1 hour.			

## Sensitivity Guaranteed

- TR-FRET Assy is well known to be more sensitive than traditional enzyme-based assays due to the lanthanide-based donor fluorophores, which have long fluorescence lifetimes, and time-resolved detection, which minimizes background fluorescence interference.

## High Throughput Capable

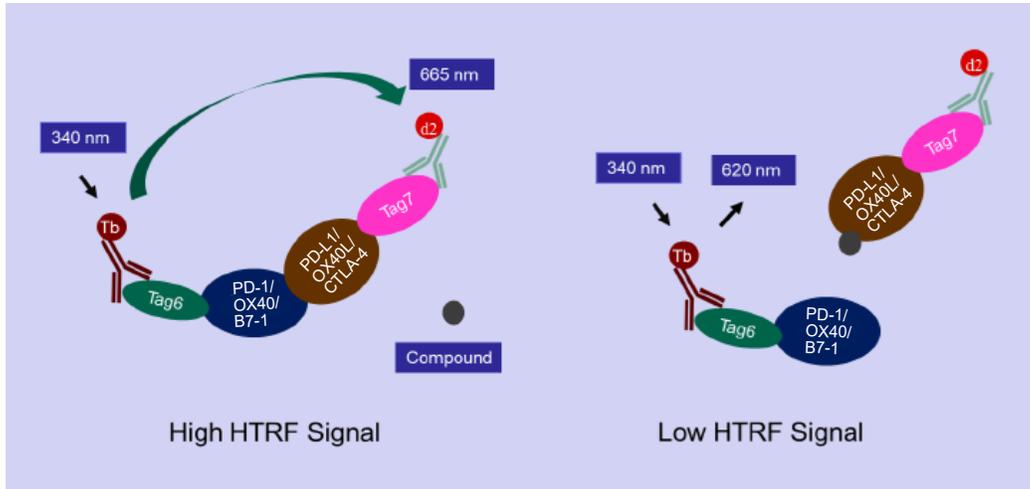
- TR-FRET Assy can be run in 384-well plates and easily automated on different platforms.

## Unparalleled Technical Support

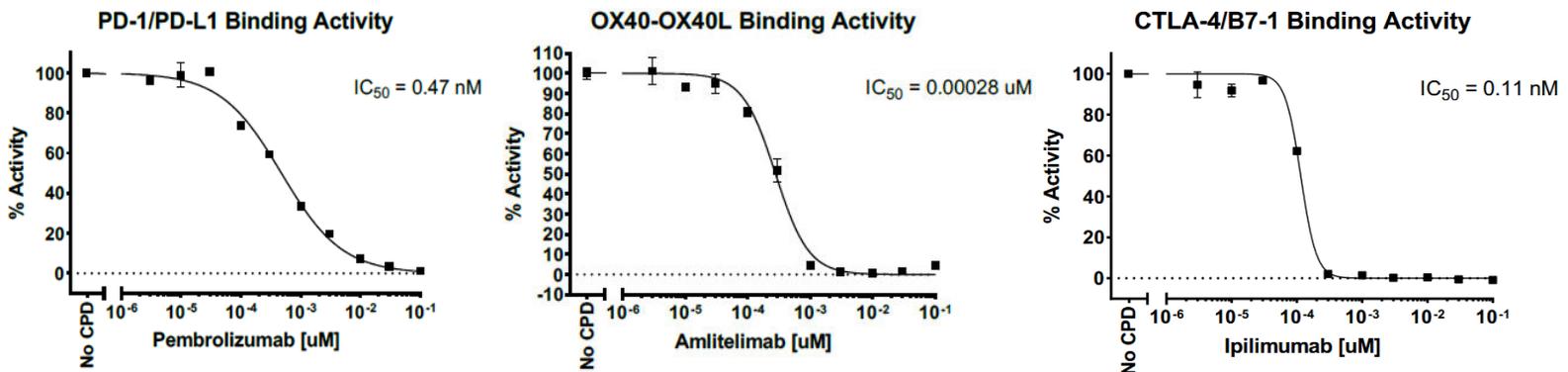
- Our assay scientists and developers have decades of experience working on assays for drug discovery and optimization. Assay-related issues are quickly answered and resolved by the same scientists and developers, who have intimate and expert knowledge on the assays and can address any issues with speed and accuracy.

# PD-1/PD-L1, OX40/OX40L, CTLA-4/B7-1 Assay Principle And Performance

## TR-FRET Assay Nuts and Bolts



## Performance Characteristics



- Binding curves of PD-1/PD-L1, OX40/OX40L, and CTLA-4/B7-2 in the presence of increasing concentrations of monoclonal antibodies.