



# ASSAYS FOR IMMUNO-ONCOLOGY TARGETS

Immuno-oncology has emerged as an exciting area of personalized medicine because of its tremendous potential to harness the powerful immune system to target and destroy cancer cells with fewer side effects than existing treatment options, targeting only the right cells at the right time. Researchers are exploring the complex relationship between tumor cells and the immune system within the tumor microenvironment in order to discover new immuno-oncology targets and therapies.

Targeting immune checkpoint inhibitors, such as PD-1, PD-L1, and CTLA-4, has become pivotal in immunotherapy research, and so have monoclonal antibodies (mAbs), whether naked or conjugated with a chemotherapy agent or radioactive particle. Our immuno-oncology immunoassays and reagents provide tools for high throughput screening, assay development, and biomarker validation. We also offer a range of phosphoprotein assays for monitoring downstream cell signaling.

	Alpha	LANCE®	DELTA®
<b>Detection Method</b>	Luminescence Proximity	Time-resolved fluorescence resonance energy transfer (TR-FRET)	Time-resolved fluorescence (TRF)
<b>λ excitation (nm)</b>	680	340	320/340
<b>λ emission (nm)</b>	520-620 (615)	665	615
<b>Wash Steps</b>	No	No	Yes
<b>Dynamic Range</b>	2.5 - 5 logs	2-3 logs	2.5 - 5 logs
<b>Detection analyte size</b>	Small molecules to whole cells	Small molecules to proteins	Small molecules to proteins

## PRODUCTS AVAILABLE FOR IMMUNO-ONCOLOGY TARGETS

TARGET	SPECIES	PATHWAY	TECHNOLOGY	CATALOG NUMBER	TARGET	SPECIES	PATHWAY	TECHNOLOGY	CATALOG NUMBER
PD-1	Hu	Immune Checkpoint	LANCE <i>Ultra</i>	TRF1343	ERK1/2 (Thr202/ Tyr204)	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-PERK-A
PD-L1	Hu	Immune Checkpoint	LANCE <i>Ultra</i>	TRF1355	ERK1/2 (total)	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-TERK-A
PD-1	Hu	Immune Checkpoint	AlphaLISA	AL343	GSK3 $\alpha$ (Ser21)	Hu	Kinase	AlphaLISA <i>SureFire</i>	TGRGAS
PD-L1	Hu	Immune Checkpoint	AlphaLISA	AL355	GSK3 $\alpha$ (Ser9) <b>*NEW*</b>	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU- PGS3B-A
CTLA-4	Hu	Immune Checkpoint	AlphaLISA	AL3050	JNK1/3 (Thr183/ Tyr185)	Hu	Kinase	AlphaLISA <i>SureFire</i>	TGRJS
CD28	Hu	Immune Checkpoint	AlphaLISA	AL3044	JNK 1/2/3 (Thr183/ Tyr185) <b>*NEW*</b>	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-PJNK-A
CD86	Hu	Immune Checkpoint	AlphaLISA	AL3045	JNK1/2/3 (total)	Hu	Kinase	AlphaLISA <i>SureFire</i>	TGRTJS
CD80	Hu	Immune Checkpoint	AlphaLISA	AL3055	MEK1 (Ser218/ 222) <b>*NEW*</b>	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU- PMEK1-A
TIM-3	Hu	Immune Checkpoint	AlphaLISA	AL3052	MEK1 (total) <b>*NEW*</b>	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU- TMEK1-A
HVEM (CD270)	Hu	Immune Checkpoint	AlphaLISA	AL3054	p70S6K (Thr229)	Hu	Kinase	AlphaLISA <i>SureFire</i>	TGR703S
B7-H5 (VISTA)	Hu	Immune Checkpoint	AlphaLISA	AL3059	p70S6K (Thr389)	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-PP70-A
GAL9 (Galectin)	Hu	Immune Checkpoint	AlphaLISA	AL3051	p70S6K (Thr421/ Ser424)	Hu	Kinase	AlphaLISA <i>SureFire</i>	TGR702S
HLA-E	Hu	Immune Checkpoint	AlphaLISA	AL3057	p70S6K (total)	Hu	Kinase	AlphaLISA <i>SureFire</i>	TGRT70S
B7-H3 (CD276)	Hu	Immune Checkpoint	AlphaLISA	AL3060	SLP-76 (Ser376) <b>*NEW*</b>	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-PSLP-A
LAG-3	Hu	Immune Checkpoint	AlphaLISA	AL3058	STAT1 (Tyr701)	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-PST1-A
BTLA (CD272)	Hu	Immune Checkpoint	AlphaLISA	AL3062	STAT1 (Ser727)	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-PST1-B
HLA-C	Hu	Immune Checkpoint	AlphaLISA	AL3061	STAT3 (Tyr705)	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-PST3-A
Beta-2-Microglobulin	Hu	Cancer	AlphaLISA	AL3067	STAT3 (total) <b>*NEW*</b>	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-TST3-A
Mesothelin	Hu	Cancer	AlphaLISA	AL3063	STAT5 (Tyr694/699) <b>*NEW*</b>	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-PST5-B
Vimentin	Hu	Cancer	AlphaLISA	AL372	STAT5 (total) <b>*NEW*</b>	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-TST5-A
Fibronectin	Hu	Cancer	AlphaLISA	AL3056	Cytotoxicity Kit	-	Cell Health	DELFlA	AD0116
PD-1/PD-L1 binding	Hu	Immune Checkpoint	AlphaLISA	AL356	Cell Proliferation Kit	-	Cell Health	DELFlA	AD0200
CTLA-4/CD80 binding	Hu	Immune Checkpoint	AlphaLISA	AL3046	ATPLite™ luminescent assay	-	Cell Health	ATPLite™	601694
CTLA-4/CD86 binding	Hu	Immune Checkpoint	AlphaLISA	AL3047	ATPLite™ 1-step luminescent assay	-	Cell Health	ATPLite™	601673
HLA-DR $\alpha$ /LAG-3 binding	Hu	Immune Checkpoint	AlphaLISA	AL3066	Akt 1/2/3 (Thr308)	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-PAKT-A
PDGF-BB/PDGFR- $\alpha$ binding	Hu	Cancer	AlphaLISA	AL3064	Akt 1/2/3 (Ser473)	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-PAKT-B
PDGF-BB/PDGFR- $\beta$ binding	Hu	Cancer	AlphaLISA	AL3065	Total Akt 1/2/3	Hu	Kinase	AlphaLISA <i>SureFire</i>	TGRTAPS
Akt 1/2/3 (Thr308)	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-PAKT-A	Akt1 (Thr308)	Hu	Kinase	AlphaLISA <i>SureFire</i>	TGRA2S
Akt 1/2/3 (Ser473)	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-PAKT-B	Akt1 (Ser473)	Hu	Kinase	AlphaLISA <i>SureFire</i>	TGRA5S
Total Akt 1/2/3	Hu	Kinase	AlphaLISA <i>SureFire</i>	TGRTAPS	Akt1 (total)	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-TAKT1-A
Akt1 (Thr308)	Hu	Kinase	AlphaLISA <i>SureFire</i>	TGRA2S	ErbB2 (Tyr1221/1222)	Hu	Kinase	AlphaLISA <i>SureFire</i>	TGREB2S
Akt1 (Ser473)	Hu	Kinase	AlphaLISA <i>SureFire</i>	TGRA5S					
Akt1 (total)	Hu	Kinase	AlphaLISA <i>SureFire Ultra</i>	ALSU-TAKT1-A					
ErbB2 (Tyr1221/1222)	Hu	Kinase	AlphaLISA <i>SureFire</i>	TGREB2S					

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For more information on PerkinElmer immuno-oncology targets, visit [www.perkinelmer.com](http://www.perkinelmer.com)

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