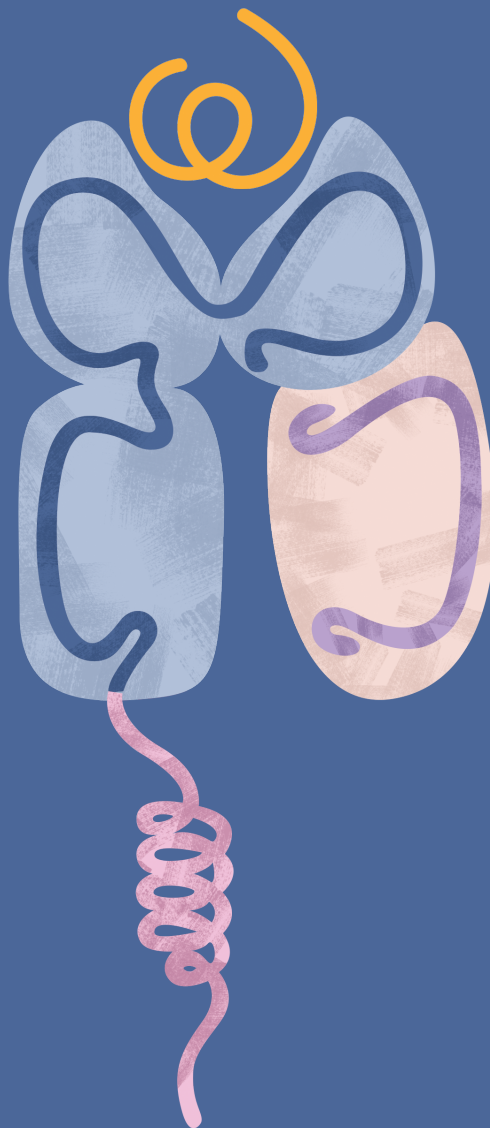


MHC & TCR Solutions

Catalog & Custom Services for MHC
Monomers, Tetramers, & Soluble TCRs



Major Histocompatibility Complex (MHC)

Major Histocompatibility Complex (MHC) molecules, referred to as Human Leukocyte Antigens (HLA) in humans, constitute a highly polymorphic family of cell surface glycoproteins. These molecules present intracellularly processed peptide antigens by forming stable MHC–peptide complexes. Following assembly, the complexes are trafficked to the cell membrane, where they are recognized by antigen-specific T cell receptors (TCRs), thereby triggering downstream adaptive immune responses.

Given the central role of MHC molecules in antigen presentation and TCR recognition, they have become indispensable tools for TCR-based therapeutic research. To support this growing demand, KACTUS has developed a comprehensive portfolio of high-quality recombinant MHC products, including MHC monomers, tetramers, peptide-ready MHCs, as well as custom production services for both MHCs and TCRs. Our offerings span a broad range of MHC alleles and clinically relevant targets such as NY-ESO-1, KRAS, and AFP, providing versatile solutions to advance drug discovery and immunotherapy development.

Product Application:



Animal
Immunization



Antibody
Screening



Binding-Affinity
Research



TCR screening
& validation



FACS
analysis



ELISA, BLI
and SPR analysis

Our MHC Product Portfolio



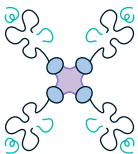
MHC-Peptide Monomers

Bacteria-refolded MHC monomer & Mammalian Single Chain Trimer (SCT)



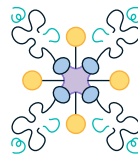
Biotinylated MHC-Peptide Monomers

MHC monomers with avi-based biotinylation at C-terminus



MHC-Peptide Tetramers

MHC Tetramers with enhanced binding affinity



Fluorescent MHC-Peptide Tetramers

Fluorescent-labeled Tetramers for flow cytometry analysis



Off-the-Shelf Catalog
Products



Diverse allele-antigen
combination



Verified Bioactivity via
ELISA, SPR, & FACS

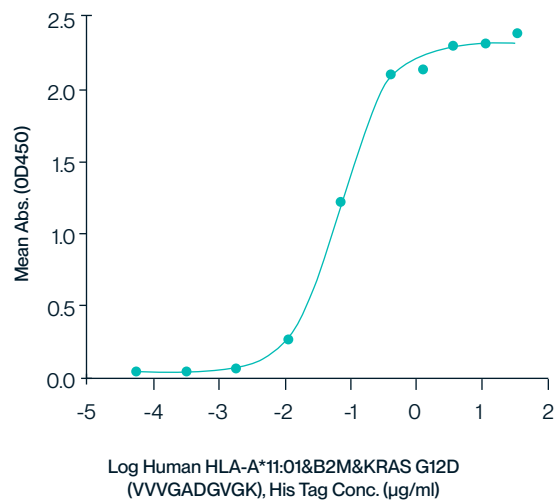


Biotinylation &
Fluorescent-Labeling
Available

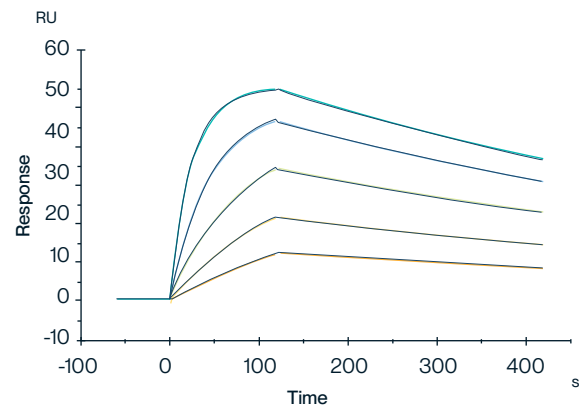
Robust Performance of MHC in Binding Assays with TCRs & TCR-Mimic Antibodies

Bacteria-refolded MHC

Human HLA-A*11:01&B2M&KRAS G12D (VVVGADGVGK) Monomer Protein (MHC-HM454)



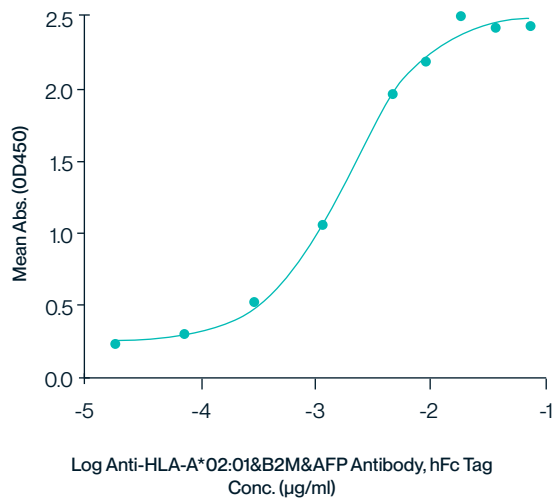
Immobilized HLA-A*11:01&B2M&KRAS G12D (VVVGADGVGK) TCR at 5 µg/ml (100 µl/well) on the plate. Dose response curve for Human HLA-A*11:01&B2M&KRAS G12D (VVVGADGVGK) Monomer, His Tag with the EC50 of 66.0 ng/ml determined by ELISA



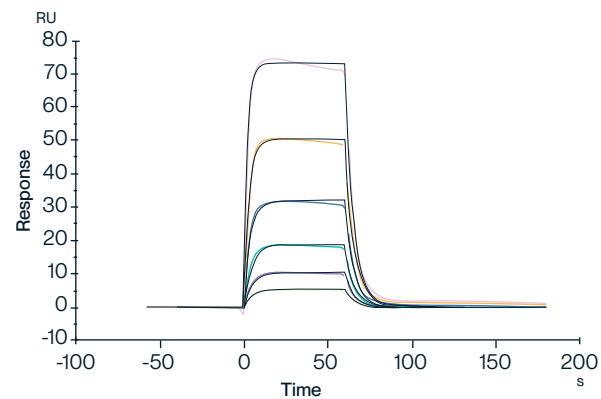
Human HLA-A*11:01&B2M&KRAS G12D (VVVGADGVGK) Monomer, His Tag captured on CM5 Chip via anti-his antibody can bind HLA-A*11:01&B2M&KRAS G12D (VVVGADGVGK) TCR with an affinity constant of 6.93 nM as determined in SPR assay (Biacore T200).

Single Chain Trimer

Human HLA-A*02:01&B2M&AFP (FMNKFIYEI) Monomer Protein (MHC-HM407)



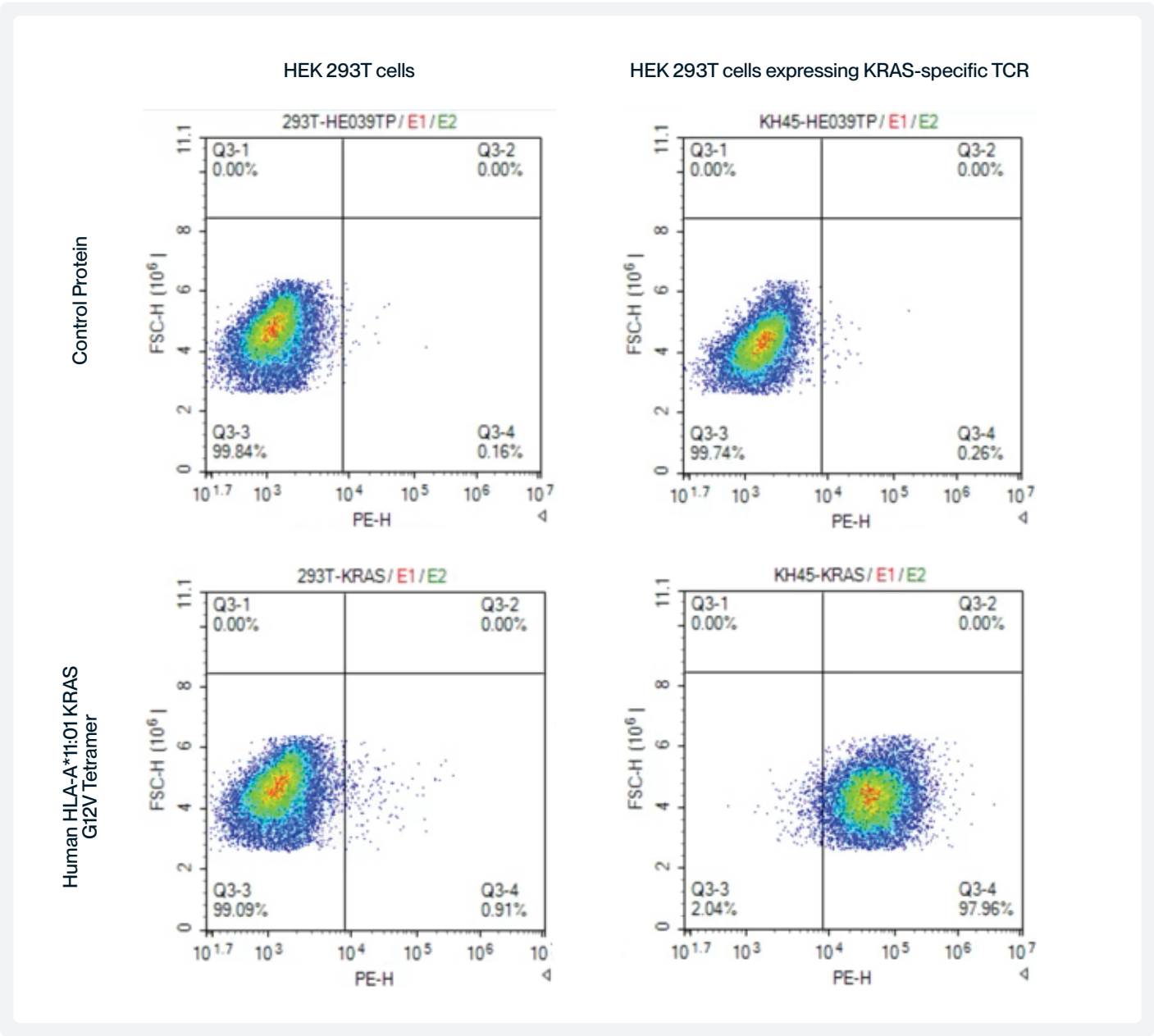
Immobilized Human HLA-A*02:01&B2M&AFP (FMNKFIYEI) Monomer, His Tag at 1 µg/ml (100 µl/well) on the plate. Dose response curve for Anti-HLA-A*02:01&B2M&AFP (FMNKFIYEI) Antibody, hFc Tag with the EC50 of 1.9ng/ml determined by ELISA.



Human HLA-A*02:01&B2M&AFP (FMNKFIYEI) Monomer, His Tag captured on CM5 Chip via Anti-His Antibody can bind HLA-A*02:01&B2M&AFP (FMNKFIYEI) TCR with an affinity constant of 0.923 µM as determined in SPR assay (Biacore T200).

FACS Analysis of Antigen-specific T cells using MHC Tetramers

MHC-peptide tetramers are an essential tool in immunology for detecting and studying antigen-specific T cells, offering insights into immune responses and TCR specificity. Our PE-labeled MHC-peptide tetramers are designed to provide researchers with an accurate and robust solutions for identifying antigen-specific T cells.



KRAS G12V-specific TCR-HEK293T cells were stained with PE-Labeled HLA-A*11:01 KRAS G12V Tetramer. Non-transfected HEK293T cells and PE-Labeled proteins were used as negative control.



Learn More & Browse

E. Coli-Refolded MHC-Peptide Complexes

Catalog #	Allele	Type	Antigen	Peptide	Species
MHC-HE013B	HLA-A*02:01	Biotinylated Monomer	CMVpp65	NLVPMVATV	Human
MHC-HE007B	HLA-A*02:01	Biotinylated Monomer	KRAS G12V	KLVVVGAVGV	Human
MHC-HE008B	HLA-A*02:01	Biotinylated Monomer	KRAS WT	KLVVVGAGGV	Human
MHC-HE011B	HLA-A*02:01	Biotinylated Monomer	P53 R175H	HMTEVVRHC	Human
MHC-HE012B	HLA-A*02:01	Biotinylated Monomer	P53 WT	HMTEVVRRC	Human
MHC-HM455B	HLA-A*11:01	Biotinylated Monomer	KRAS G12D	VVGADGVGK	Human
MHC-HM454B	HLA-A*11:01	Biotinylated Monomer	KRAS G12D	VVGADGVGK	Human
MHC-HE006B	HLA-A*11:01	Biotinylated Monomer	KRAS G12V	VVGAVGVGK	Human
MHC-HE005B	HLA-A*11:01	Biotinylated Monomer	KRAS G12V	VVGAVGVGK	Human
MHC-HE002B	HLA-A*11:01	Biotinylated Monomer	KRAS WT	VVGAGGVGK	Human
MHC-HE001B	HLA-A*11:01	Biotinylated Monomer	KRAS WT	VVGAGGVGK	Human
MHC-HE013	HLA-A*02:01	Monomer	CMVpp65	NLVPMVATV	Human
MHC-HE013T	HLA-A*02:01	Tetramer	CMVpp65	NLVPMVATV	Human
MHC-HE008	HLA-A*02:01	Monomer	KRAS WT	KLVVVGAGGV	Human
MHC-HE446	HLA-A*02:01	Monomer	NY-ESO-1	SLLMWITQC	Human
MHC-HE446T	HLA-A*02:01	Tetramer	NY-ESO-1	SLLMWITQC	Human
MHC-HE011	HLA-A*02:01	Monomer	P53 R175H	HMTEVVRHC	Human
MHC-HE012	HLA-A*02:01	Monomer	P53 WT	HMTEVVRRC	Human
MHC-HE010	HLA-A*02:01	Monomer	WT-1	RMFPNAPYL	Human
MHC-HM455	HLA-A*11:01	Monomer	KRAS G12D	VVGADGVGK	Human
MHC-HM454	HLA-A*11:01	Monomer	KRAS G12D	VVGADGVGK	Human
MHC-HE006	HLA-A*11:01	Monomer	KRAS G12V	VVGAVGVGK	Human
MHC-HE005	HLA-A*11:01	Monomer	KRAS G12V	VVGAVGVGK	Human
MHC-HE001	HLA-A*11:01	Monomer	KRAS WT	VVGAGGVGK	Human
MHC-HE005TP	HLA-A*11:01	PE-Labeled Tetramer	KRAS G12V	VVGAVGVGK	Human

Mammalian-Expressed Single Chain Trimer MHC-Peptide Complexes

Catalog #	Allele	Type	Species	Antigen	Peptide	Tag
MHC-MM453	H-2K (b)	Monomer	Mouse	OVA	SIINFEKL	C-His-Avi
MHC-MM453B	H-2K(b)	Biotinylated Monomer	Mouse	OVA	SIINFEKL	C-His-Avi
MHC-MM453TP	H-2K(b)	PE-Labeled Tetramer	Mouse	OVA	SIINFEKL	C-His-Avi
MHC-HM102	HLA (DRDB1 04:05:01)	Monomer	Human	Hemagglutinin	PKYVKQNTLKLAT	C-His
MHC-HM101	HLA (DRDB1 04:05:01)	Monomer	Human	Hemagglutinin	PKYVKQNTLKLAT	C-His
MHC-HM426	HLA-A*01:01	Monomer	Human	CT83	NTDNNLAVY	C-His-Avi
MHC-HM426T	HLA-A*01:01	Tetramer	Human	CT83	NTDNNLAVY	C-His-Avi
MHC-HM428	HLA-A*01:01	Monomer	Human	DSG3	YTDNLWAVY	C-His-Avi
MHC-HM427B	HLA-A*01:01	Biotinylated Monomer	Human	MAGE-A3	EVDPIGHLY	C-His-Avi
MHC-HM427	HLA-A*01:01	Monomer	Human	MAGE-A3	EVDPIGHLY	C-His-Avi
MHC-HM427T	HLA-A*01:01	Tetramer	Human	MAGE-A3	EVDPIGHLY	C-His-Avi
MHC-HM407B	HLA-A*02:01	Biotinylated Monomer	Human	AFP	FMNKFIEI	C-His-Avi
MHC-HM407	HLA-A*02:01	Monomer	Human	AFP	FMNKFIEI	C-His-Avi
MHC-HM407TP	HLA-A*02:01	PE-Labeled Tetramer	Human	AFP	FMNKFIEI	C-His-Avi
MHC-HM407T	HLA-A*02:01	Tetramer	Human	AFP	FMNKFIEI	C-His-Avi
MHC-HM408B	HLA-A*02:01	Biotinylated Monomer	Human	AFP	PLFQVPEPV	C-His-Avi
MHC-HM408	HLA-A*02:01	Monomer	Human	AFP	PLFQVPEPV	C-His-Avi
MHC-HM408T	HLA-A*02:01	Tetramer	Human	AFP	PLFQVPEPV	C-His-Avi
MHC-HM458B	HLA-A*02:01	Biotinylated Monomer	Human	CMV pp65	NLVPMVATV	C-His-Avi
MHC-HM458	HLA-A*02:01	Monomer	Human	CMV pp65	NLVPMVATV	C-His-Avi
MHC-HM458TP	HLA-A*02:01	PE-Labeled Tetramer	Human	CMV pp65	NLVPMVATV	C-His-Avi
MHC-HM458T	HLA-A*02:01	Tetramer	Human	CMV pp65	NLVPMVATV	C-His-Avi
MHC-HM402B	HLA-A*02:01	Biotinylated Monomer	Human	GP100	YLEPGPVTA	C-His-Avi
MHC-HM402	HLA-A*02:01	Monomer	Human	GP100	YLEPGPVTA	C-His-Avi
MHC-HM150	HLA-A*02:01	Monomer	Human&Mouse	GP100	YLEPGPVTA	C-His
MHC-HM402T	HLA-A*02:01	Tetramer	Human	GP100	YLEPGPVTA	C-His-Avi
MHC-HM409B	HLA-A*02:01	Biotinylated Monomer	Human	HBV	FLLTRILT	C-His-Avi
MHC-HM409	HLA-A*02:01	Monomer	Human	HBV	FLLTRILT	C-His-Avi
MHC-HM409T	HLA-A*02:01	Tetramer	Human	HBV	FLLTRILT	C-His-Avi
MHC-HM465	HLA-A*02:01	Monomer	Human	HIV Gag	SLYNTVATL	C-His-Avi
MHC-HM436	HLA-A*02:01	Monomer	Human	HPV 16 E6	KLPQLCTEL	C-His-Avi
MHC-HM436T	HLA-A*02:01	Tetramer	Human	HPV 16 E6	KLPQLCTEL	C-His-Avi
MHC-HM424B	HLA-A*02:01	Biotinylated Monomer	Human	HPV16 E7	YMLDLQPET	C-His-Avi
MHC-HM424	HLA-A*02:01	Monomer	Human	HPV16 E7	YMLDLQPET	C-His-Avi
MHC-HM24MT	HLA-A*02:01	Tetramer	Human	HPV16 E7	YMLDLQPET	C-His-Avi
MHC-HM411B	HLA-A*02:01	Biotinylated Monomer	Human	LMP2	CLGGLTMV	C-His-Avi
MHC-HM411	HLA-A*02:01	Monomer	Human	LMP2	CLGGLTMV	C-His-Avi
MHC-HM413	HLA-A*02:01	Monomer	Human&Mouse	LMP2	CLGGLTMV	C-His-Avi
MHC-HM411T	HLA-A*02:01	Tetramer	Human	LMP2	CLGGLTMV	C-His-Avi
MHC-HM413T	HLA-A*02:01	Tetramer	Human&Mouse	LMP2	CLGGLTMV	C-His-Avi
MHC-HM445B	HLA-A*02:01	Biotinylated Monomer	Human	MAGE-A1	KVLEYVIKV	C-His-Avi
MHC-HM445	HLA-A*02:01	Monomer	Human	MAGE-A1	KVLEYVIKV	C-His-Avi
MHC-HM103	HLA-A*02:01	Monomer	Human&Mouse	MAGE-A1	KVLEYVIKV	C-His
MHC-HM445TP	HLA-A*02:01	PE-Labeled Tetramer	Human	MAGE-A1	KVLEYVIKV	C-His-Avi
MHC-HM445T	HLA-A*02:01	Tetramer	Human	MAGE-A1	KVLEYVIKV	C-His-Avi
MHC-HM459B	HLA-A*02:01	Biotinylated Monomer	Human	MAGE-A10	GLYDGMEHL	C-His-Avi
MHC-HM459	HLA-A*02:01	Monomer	Human	MAGE-A10	GLYDGMEHL	C-His-Avi
MHC-HM459TP	HLA-A*02:01	PE-Labeled Tetramer	Human	MAGE-A10	GLYDGMEHL	C-His-Avi

Catalog #	Allele	Type	Species	Antigen	Peptide	Tag
MHC-HM459T	HLA-A*02:01	Tetramer	Human	MAGE-A10	GLYDGM EHL	C-His-Avi
MHC-HM460B	HLA-A*02:01	Biotinylated Monomer	Human	MAGE-A2	KMVELVHFL	C-His-Avi
MHC-HM104	HLA-A*02:01	Monomer	Human&Mouse	MAGE-A2	KMVELVHFL	C-His
MHC-HM461B	HLA-A*02:01	Biotinylated Monomer	Human	MAGE-A3	KVAELVHFL	C-His-Avi
MHC-HM105	HLA-A*02:01	Monomer	Human&Mouse	MAGE-A3	KVAELVHFL	C-His
MHC-HM401B	HLA-A*02:01	Biotinylated Monomer	Human	MAGE-A4	GVYDGREHTV	C-His-Avi
MHC-HM401	HLA-A*02:01	Monomer	Human	MAGE-A4	GVYDGREHTV	C-His-Avi
MHC-HM401TP	HLA-A*02:01	PE-Labeled Tetramer	Human	MAGE-A4	GVYDGREHTV	C-His-Avi
MHC-HM401T	HLA-A*02:01	Tetramer	Human	MAGE-A4	GVYDGREHTV	C-His-Avi
MHC-HM437B	HLA-A*02:01	Biotinylated Monomer	Human	MAGE-A4	KVLEHVVRV	C-His-Avi
MHC-HM437	HLA-A*02:01	Monomer	Human	MAGE-A4	KVLEHVVRV	C-His-Avi
MHC-HM106	HLA-A*02:01	Monomer	Human	MAGE-A4	KVLEHVVRV	C-His
MHC-HM435B	HLA-A*02:01	Biotinylated Monomer	Human	MART-1	ELAGIGILTV	C-His-Avi
MHC-HM435	HLA-A*02:01	Monomer	Human	MART-1	ELAGIGILTV	C-His-Avi
MHC-HM435TP	HLA-A*02:01	PE-Labeled Tetramer	Human	MART-1	ELAGIGILTV	C-His-Avi
MHC-HM435T	HLA-A*02:01	Tetramer	Human	MART-1	ELAGIGILTV	C-His-Avi
MHC-HM405B	HLA-A*02:01	Biotinylated Monomer	Human	NY-ESO-1	SLLMWITQC	C-His-Avi
MHC-HM405	HLA-A*02:01	Monomer	Human	NY-ESO-1	SLLMWITQC	C-His-Avi
MHC-HM151	HLA-A*02:01	Monomer	Human&Mouse	NY-ESO-1	SLLMWITQC	C-His
MHC-HM405TP	HLA-A*02:01	PE-Labeled Tetramer	Human	NY-ESO-1	SLLMWITQC	C-His-Avi
MHC-HM405T	HLA-A*02:01	Tetramer	Human	NY-ESO-1	SLLMWITQC	C-His-Avi
MHC-HM40NB	HLA-A*02:01	Biotinylated Monomer	Human	NY-ESO-1	SLLMWITQV	C-His-Avi
MHC-HM40N	HLA-A*02:01	Monomer	Human	NY-ESO-1	SLLMWITQV	C-His-Avi
MHC-HM40NT	HLA-A*02:01	Tetramer	Human	NY-ESO-1	SLLMWITQV	C-His-Avi
MHC-HM10BTC	HLA-A*02:01	APC-Equivalent Tetramer	Human	P53 R175H	HMTEVVRHC	C-His
MHC-HM415	HLA-A*02:01	Monomer	Human	P53 R175H	HMTEVVRHC	C-His-Avi
MHC-HM415TP	HLA-A*02:01	PE-Labeled Tetramer	Human	P53 R175H	HMTEVVRHC	C-His-Avi
MHC-HM415T	HLA-A*02:01	Tetramer	Human	P53 R175H	HMTEVVRHC	C-His-Avi
MHC-HM416B	HLA-A*02:01	Biotinylated Monomer	Human	P53 WT	HMTEVVRRC	C-His-Avi
MHC-HM416	HLA-A*02:01	Monomer	Human	P53 WT	HMTEVVRRC	C-His-Avi
MHC-HM416TP	HLA-A*02:01	PE-Labeled Tetramer	Human	P53 WT	HMTEVVRRC	C-His-Avi
MHC-HM416T	HLA-A*02:01	Tetramer	Human	P53 WT	HMTEVVRRC	C-His-Avi
MHC-HM447B	HLA-A*02:01	Biotinylated Monomer	Human	PRAME	ALYVDSLFFL	C-His-Avi
MHC-HM447	HLA-A*02:01	Monomer	Human	PRAME	ALYVDSLFFL	C-His-Avi
MHC-HM447T	HLA-A*02:01	Tetramer	Human	PRAME	ALYVDSLFFL	C-His-Avi
MHC-HM443B	HLA-A*02:01	Biotinylated Monomer	Human	PRAME	SLLQHLIGL	C-His-Avi
MHC-HM443	HLA-A*02:01	Monomer	Human	PRAME	SLLQHLIGL	C-His-Avi
MHC-HM443TP	HLA-A*02:01	PE-Labeled Tetramer	Human	PRAME	SLLQHLIGL	C-His-Avi
MHC-HM443T	HLA-A*02:01	Tetramer	Human	PRAME	SLLQHLIGL	C-His-Avi
MHC-HM412B	HLA-A*02:01	Biotinylated Monomer	Human	Survivin	LMLGEFLKL	C-His-Avi
MHC-HM412	HLA-A*02:01	Monomer	Human	Survivin	LMLGEFLKL	C-His-Avi
MHC-HM412T	HLA-A*02:01	Tetramer	Human	Survivin	LMLGEFLKL	C-His-Avi
MHC-HM4A1B	HLA-A*02:01	Biotinylated Monomer	Human	Survivin	LTLGEFLKL	C-His-Avi
MHC-HM4A1T	HLA-A*02:01	Tetramer	Human	Survivin	LTLGEFLKL	C-His-Avi
MHC-HM473	HLA-A*02:01	Monomer	Human	TERT	ILAKFLHWL	C-His-Avi
MHC-HM107	HLA-A*02:01	Monomer	Human	TERT	ILAKFLHWL	C-His
MHC-HM431B	HLA-A*02:01	Biotinylated Monomer	Human	WT-1	RMFPNAPYL	C-His-Avi
MHC-HM431	HLA-A*02:01	Monomer	Human	WT-1	RMFPNAPYL	C-His-Avi
MHC-HM414	HLA-A*02:01	Monomer	Human&Mouse	WT-1	RMFPNAPYL	C-His-Avi
MHC-HM467	HLA-A*02:01	Monomer	Human&Mouse	WT-1	RMFPNAPYL	C-His

Catalog #	Allele	Type	Species	Antigen	Peptide	Tag
MHC-HM431T	HLA-A*02:01	Tetramer	Human	WT-1	RMFPNAPYL	C-His-Avi
MHC-HM414T	HLA-A*02:01	Tetramer	Human&Mouse	WT-1	RMFPNAPYL	C-His-Avi
MHC-HM432B	HLA-A*02:03	Biotinylated Monomer	Human	AFP	FMNKFYIEI	C-His-Avi
MHC-HM432	HLA-A*02:03	Monomer	Human	AFP	FMNKFYIEI	C-His-Avi
MHC-HM432TP	HLA-A*02:03	PE-Labeled Tetramer	Human	AFP	FMNKFYIEI	C-His-Avi
MHC-HM432T	HLA-A*02:03	Tetramer	Human	AFP	FMNKFYIEI	C-His-Avi
MHC-HM463B	HLA-A*03:01	Biotinylated Monomer	Human	gp100	ALLAVGATK	C-His-Avi
MHC-HM463	HLA-A*03:01	Monomer	Human	gp100	ALLAVGATK	C-His-Avi
MHC-HM463T	HLA-A*03:01	Tetramer	Human	gp100	ALLAVGATK	C-His-Avi
MHC-HM456B	HLA-A*03:01	Biotinylated Monomer	Human	KRAS G12V	VVGAVGVGK	C-His-Avi
MHC-HM456	HLA-A*03:01	Monomer	Human	KRAS G12V	VVGAVGVGK	C-His-Avi
MHC-HM456TP	HLA-A*03:01	PE-Labeled Tetramer	Human	KRAS G12V	VVGAVGVGK	C-His-Avi
MHC-HM418B	HLA-A*03:01	Biotinylated Monomer	Human	KRAS G12V	VVVGAVGVGK	C-His-Avi
MHC-HM418	HLA-A*03:01	Monomer	Human	KRAS G12V	VVVGAVGVGK	C-His-Avi
MHC-HM418TP	HLA-A*03:01	PE-Labeled Tetramer	Human	KRAS G12V	VVVGAVGVGK	C-His-Avi
MHC-HM418T	HLA-A*03:01	Tetramer	Human	KRAS G12V	VVVGAVGVGK	C-His-Avi
MHC-HM423B	HLA-A*03:01	Biotinylated Monomer	Human	KRAS WT	VVVGAGGVGK	C-His-Avi
MHC-HM423	HLA-A*03:01	Monomer	Human	KRAS WT	VVVGAGGVGK	C-His-Avi
MHC-HM423T	HLA-A*03:01	Tetramer	Human	KRAS WT	VVVGAGGVGK	C-His-Avi
MHC-HM478	HLA-A*11:01	Monomer	Human	EGFR L858R	KITDFGRAK	C-His
MHC-HM479T	HLA-A*11:01	Tetramer	Human	EGFR L858R	KITDFGRAK	C-His-Avi
MHC-HM464B	HLA-A*11:01	Biotinylated Monomer	Human	HPV16 E7	IVCPICSQK	C-His-Avi
MHC-HM464	HLA-A*11:01	Monomer	Human	HPV16 E7	IVCPICSQK	C-His-Avi
MHC-HM464T	HLA-A*11:01	Tetramer	Human	HPV16 E7	IVCPICSQK	C-His-Avi
MHC-HM441B	HLA-A*11:01	Biotinylated Monomer	Human	KRAS G12A	VVVGAAAGVGK	C-His-Avi
MHC-HM441	HLA-A*11:01	Monomer	Human	KRAS G12A	VVVGAAAGVGK	C-His-Avi
MHC-HM441T	HLA-A*11:01	Tetramer	Human	KRAS G12A	VVVGAAAGVGK	C-His-Avi
MHC-HM439B	HLA-A*11:01	Biotinylated Monomer	Human	KRAS G12C	VVVGACGVGK	C-His-Avi
MHC-HM439	HLA-A*11:01	Monomer	Human	KRAS G12C	VVVGACGVGK	C-His-Avi
MHC-HM439T	HLA-A*11:01	Tetramer	Human	KRAS G12C	VVVGACGVGK	C-His-Avi
MHC-HM420B	HLA-A*11:01	Biotinylated Monomer	Human	KRAS G12D	VVVGADGVGK	C-His-Avi
MHC-HM420	HLA-A*11:01	Monomer	Human	KRAS G12D	VVVGADGVGK	C-His-Avi
MHC-HM420TP	HLA-A*11:01	PE-Labeled Tetramer	Human	KRAS G12D	VVVGADGVGK	C-His-Avi
MHC-HM420T	HLA-A*11:01	Tetramer	Human	KRAS G12D	VVVGADGVGK	C-His-Avi
MHC-HM440B	HLA-A*11:01	Biotinylated Monomer	Human	KRAS G12R	VVVGARGVGK	C-His-Avi
MHC-HM440	HLA-A*11:01	Monomer	Human	KRAS G12R	VVVGARGVGK	C-His-Avi
MHC-HM440T	HLA-A*11:01	Tetramer	Human	KRAS G12R	VVVGARGVGK	C-His-Avi
MHC-HM442B	HLA-A*11:01	Biotinylated Monomer	Human	KRAS G12S	VVVGASGVGK	C-His-Avi
MHC-HM442	HLA-A*11:01	Monomer	Human	KRAS G12S	VVVGASGVGK	C-His-Avi
MHC-HM442T	HLA-A*11:01	Tetramer	Human	KRAS G12S	VVVGASGVGK	C-His-Avi
MHC-HM422B	HLA-A*11:01	Biotinylated Monomer	Human	KRAS G12V	VVGAVGVGK	C-His-Avi
MHC-HM422	HLA-A*11:01	Monomer	Human	KRAS G12V	VVGAVGVGK	C-His-Avi
MHC-HM422T	HLA-A*11:01	Tetramer	Human	KRAS G12V	VVGAVGVGK	C-His-Avi
MHC-HM421B	HLA-A*11:01	Biotinylated Monomer	Human	KRAS G12V	VVVGAVGVGK	C-His-Avi
MHC-HM421F	HLA-A*11:01	FITC-Labeled Monomer	Human	KRAS G12V	VVVGAVGVGK	C-His-Avi
MHC-HM421	HLA-A*11:01	Monomer	Human	KRAS G12V	VVVGAVGVGK	C-His-Avi
MHC-HM421TP	HLA-A*11:01	PE-Labeled Tetramer	Human	KRAS G12V	VVVGAVGVGK	C-His-Avi
MHC-HM421T	HLA-A*11:01	Tetramer	Human	KRAS G12V	VVVGAVGVGK	C-His-Avi
MHC-HM429B	HLA-A*11:01	Biotinylated Monomer	Human	KRAS WT	VVVGAGGVGK	C-His-Avi
MHC-HM429F	HLA-A*11:01	FITC-Labeled Monomer	Human	KRAS WT	VVVGAGGVGK	C-His-Avi

Catalog #	Allele	Type	Species	Antigen	Peptide	Tag
MHC-HM429	HLA-A*11:01	Monomer	Human	KRAS WT	VVVGAGGVGK	C-His-Avi
MHC-HM429TP	HLA-A*11:01	PE-Labeled Tetramer	Human	KRAS WT	VVVGAGGVGK	C-His-Avi
MHC-HM429T	HLA-A*11:01	Tetramer	Human	KRAS WT	VVVGAGGVGK	C-His-Avi
MHC-HM410B	HLA-A*11:01	Biotinylated Monomer	Human	LMP2	SSCSSCPLTK	C-His-Avi
MHC-HM410	HLA-A*11:01	Monomer	Human	LMP2	SSCSSCPLTK	C-His-Avi
MHC-HM410T	HLA-A*11:01	Tetramer	Human	LMP2	SSCSSCPLTK	C-His-Avi
MHC-HM472AF6	HLA-A*11:01	AF647-Labeled Monomer	Human	MATN2	KTLTSVFQK	C-His-Avi
MHC-HM472B	HLA-A*11:01	Biotinylated Monomer	Human	MATN2	KTLTSVFQK	C-His-Avi
MHC-HM472	HLA-A*11:01	Monomer	Human	MATN2	KTLTSVFQK	C-His-Avi
MHC-HM433B	HLA-A*24:02	Biotinylated Monomer	Human	GP100 Intron 4	VYFFLPDHL	C-His-Avi
MHC-HM433	HLA-A*24:02	Monomer	Human	GP100 Intron 4	VYFFLPDHL	C-His-Avi
MHC-HM434B	HLA-A*24:02	Biotinylated Monomer	Human	MAGE-A3	IMPKAGLLI	C-His-Avi
MHC-HM434	HLA-A*24:02	Monomer	Human	MAGE-A3	IMPKAGLLI	C-His-Avi
MHC-HM434T	HLA-A*24:02	Tetramer	Human	MAGE-A3	IMPKAGLLI	C-His-Avi
MHC-HM430B	HLA-A*24:02	Biotinylated Monomer	Human	Survivin 2B	AYACNTSTL	C-His-Avi
MHC-HM430	HLA-A*24:02	Monomer	Human	Survivin 2B	AYACNTSTL	C-His-Avi
MHC-HM430T	HLA-A*24:02	Tetramer	Human	Survivin 2B	AYACNTSTL	C-His-Avi
MHC-HM448B	HLA-B*15:01	Biotinylated Monomer	Human	SARS-CoV-2 epitope	NQKLIANQF	C-His-Avi
MHC-HM448	HLA-B*15:01	Monomer	Human	SARS-CoV-2 epitope	NQKLIANQF	C-His-Avi
MHC-HM10CTC	HLA-C 03:04	APC-Equivalent Tetramer	Human	KRAS G12D	GADGVGKSAL	C-His
MHC-HM438B	HLA-C 03:04	Biotinylated Monomer	Human	KRAS G12D	GADGVGKSAL	C-His-Avi
MHC-HM438	HLA-C 03:04	Monomer	Human	KRAS G12D	GADGVGKSAL	C-His-Avi
MHC-HM438T	HLA-C 03:04	Tetramer	Human	KRAS G12D	GADGVGKSAL	C-His-Avi
MHC-HM438TP	HLA-C 03:04	Tetramer	Human	KRAS G12D	GADGVGKSAL	C-His-Avi
MHC-HM40C	HLA-E*01:03	Monomer	Human	--	VMAPKTLVL	C-His-Avi
MHC-HM406B	HLA-E*01:03	Biotinylated Monomer	Human	--	VMAPRTLVL	C-His-Avi
MHC-HM406TB	HLA-E*01:03	Biotinylated Tetramer	Human	--	VMAPRTLVL	C-His-Avi
MHC-HM406	HLA-E*01:03	Monomer	Human	--	VMAPRTLVL	C-His-Avi
MHC-HM406T	HLA-E*01:03	Tetramer	Human	--	VMAPRTLVL	C-His-Avi
MHC-HM466B	HLA-E*01:03	Biotinylated Monomer	Human	EBV LMP1	GGDPHLPTL	C-His-Avi
MHC-HM466	HLA-E*01:03	Monomer	Human	EBV LMP1	GGDPHLPTL	C-His-Avi
HLG-HM40GTC	HLA-G	APC-Equivalent Tetramer	Human	--	RIIPRHLQL	C-His
HLG-CM41CB	HLA-G	Biotinylated Monomer	Cynomolgus	--	RIIPRHLQL	C-His-Avi
HLG-HM41CB	HLA-G	Biotinylated Monomer	Human	--	RIIPRHLQL	C-His-Avi
HLG-RM41CB	HLA-G	Biotinylated Monomer	Rhesus macaque	--	RIIPRHLQL	C-His-Avi
HLG-HM41CTB	HLA-G	Biotinylated Tetramer	Human	--	RIIPRHLQL	C-His-Avi
HLG-CM41C	HLA-G	Monomer	Cynomolgus	--	RIIPRHLQL	C-His-Avi
HLG-HM41C	HLA-G	Monomer	Human	--	RIIPRHLQL	C-His-Avi
HLG-RM41C	HLA-G	Monomer	Rhesus macaque	--	RIIPRHLQL	C-His-Avi
HLG-HM41CTP	HLA-G	PE-Labeled Tetramer	Human	--	RIIPRHLQL	C-His-Avi
HLG-CM41CT	HLA-G	Tetramer	Cynomolgus	--	RIIPRHLQL	C-His-Avi
HLG-HM41CT	HLA-G	Tetramer	Human	--	RIIPRHLQL	C-His-Avi
HLG-RM41CT	HLA-G	Tetramer	Rhesus macaque	--	RIIPRHLQL	C-His-Avi
MHC-MM452B	Qa-1b	Biotinylated Monomer	Mouse	Qdm	AMAPRTLTL	C-His-Avi
MHC-MM452	Qa-1b	Monomer	Mouse	Qdm	AMAPRTLTL	C-His-Avi

Peptide-Ready MHCs

Load custom peptides onto an MHC monomer or tetramer in-house with our stabilized, peptide-free MHCs.

Fast & Simple Loading Protocol

Our prMHCs can be conveniently loaded in your lab using a simple 3-step protocol, taking just 5–10 minutes at room temperature—no UV treatment or peptide exchange required.



Dissolve

Dissolve the peptide to a concentration of 1mg/mL in DMSO or PBS



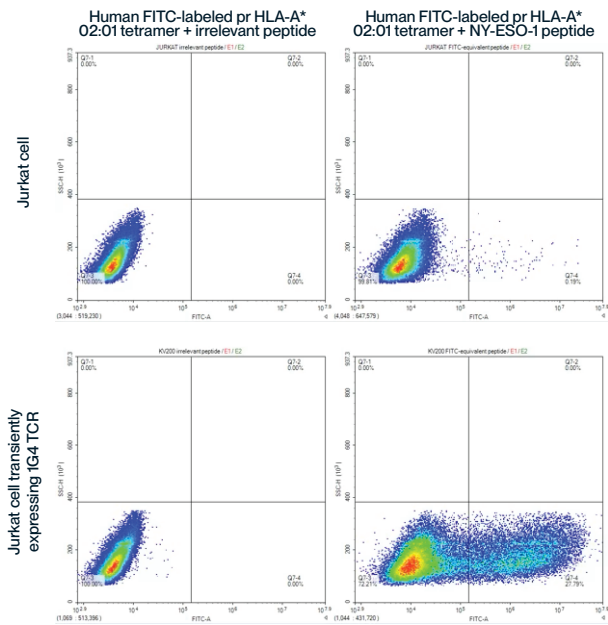
Mix

Mix peptide with MHC at a molar ratio of 5:1 to 10:1



Incubate

Incubate 5-10 minutes at room temperature



Robust Antigen-Specific T Cell Sorting

Our prMHC tetramers offer high specificity and sensitivity, enabling precise identification and sorting of T cells that recognize specific antigens.

FACS analysis of Jurkat cells with or without expressing NY-ESO-1 specific 1G4 TCR using FITC-labeled pr HLA-A*02:01 tetramers loaded with irrelevant or NY-ESO-1 peptides.

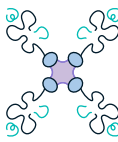
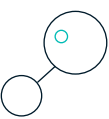
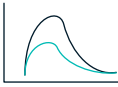
Cat. No.	Allele	Type	Species	Tag
MHC-HM43R	HLA-A*02:01	Monomer	Human	C-His-Avi
MHC-HM43RB	HLA-A*02:01	Biotinylated Monomer	Human	C-His-Avi
MHC-HM43RLF	HLA-A*02:01	FITC-Labeled Tetramer	Human	C-His-Avi
MHC-HM44R	HLA-A*03:01	Monomer	Human	C-His-Avi
MHC-HM44RB	HLA-A*03:01	Biotinylated Monomer	Human	C-His-Avi
MHC-HM44RTP	HLA-A*03:01	PE-Labeled Tetramer	Human	C-His-Avi
MHC-HM41R	HLA-A*11:01	Monomer	Human	C-His-Avi
MHC-HM41RB	HLA-A*11:01	Biotinylated Monomer	Human	C-His-Avi
MHC-HM41RB	HLA-A*11:01	Biotinylated Monomer	Human	C-His-Avi
MHC-HM41RTP	HLA-A*11:01	PE-Labeled Tetramer	Human	C-His-Avi
MHC-HM46R	HLA-A*24:02	Monomer	Human	C-His-Avi
MHC-HM46RB	HLA-A*24:02	Biotinylated Monomer	Human	C-His-Avi
MHC-HM49RB	HLA-A*26:01	Biotinylated Monomer	Human	C-His-Avi
MHC-HM54RB	HLA-A*31:01	Biotinylated Monomer	Human	C-His-Avi
MHC-HM4R1B	HLA-A*68:01	Biotinylated Monomer	Human	C-His-Avi
MHC-HM47R	HLA-B*07:02	Monomer	Human	C-His-Avi
MHC-HM47RB	HLA-B*07:02	Biotinylated Monomer	Human	C-His-Avi
MHC-HM62RB	HLA-B*27:05	Biotinylated Monomer	Human	C-His-Avi
MHC-HM48RB	HLA-B*57:01	Biotinylated Monomer	Human	C-His-Avi
MHC-HM52RB	HLA-C*03:04	Biotinylated Monomer	Human	C-His-Avi
MHC-HM59RB	HLA-C*07:02	Biotinylated Monomer	Human	C-His-Avi
MHC-HM59RB	HLA-C*07:02	Biotinylated Monomer	Human	C-His-Avi
MHC-HM42R	HLA-E*01:03	Monomer	Human	C-His-Avi
MHC-HM42RB	HLA-E*01:03	Biotinylated Monomer	Human	C-His-Avi
MHC-HM42RTR	HLA-E*01:03	FITC-Labeled Tetramer	Human	C-His-Avi
MHC-HM45R	HLA-G	Monomer	Human	C-His-Avi
MHC-HM45RB	HLA-G	Biotinylated Monomer	Human	C-His-Avi
MHC-MM50RB	H-2K(b)	Biotinylated Monomer	Mouse	C-His-Avi

Custom MHC Expression Services

At KACTUS, we specialize in providing high-quality and reliable custom MHC complexes to meet your research needs. Our team brings extensive expertise in manufacturing MHC tetramers and monomers tailored to your specific requirements with competitive price and lead time.

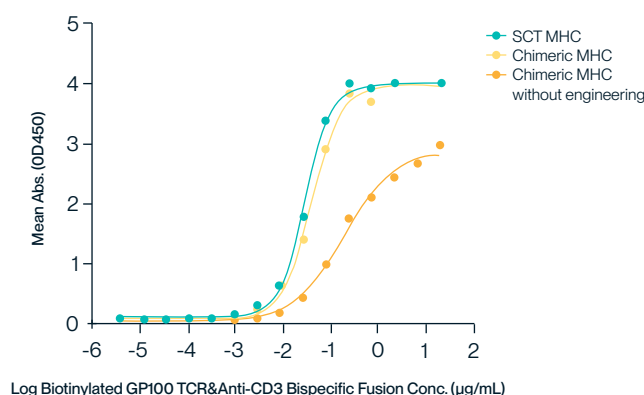
After receiving the inquiries, we will reach out to you to initiate the technical discussion and feasibility assessment. In addition, we also provide SPR analysis service for your customized MHC binding affinity testing. We welcome any inquiries on custom MHC production and analysis service, including uncommon alleles, specific expression settings, or custom sequences!

Customizable Features

 Monomer	 Tetramers	 Peptide-Ready MHC	 Chimeric MHCs
 Bacteria-refolding or Mammalian SCT	 Custom allele-peptide Combination	 Biotinylation or Fluorescent Labeling	 SPR, ELISA and BLI testing available

Chimeric MHCs

Our chimeric MHCs are designed for obtaining more effective antibodies from immunization. The human MHC $\alpha 3$ and $\beta 2M$ are replaced with the corresponding domains from immunization host species, and rational engineering is introduced to maintain the correct structure. This approach leaves more immunogenicity to the antigenic peptide, boosting the probability of generating effective antibodies, and thereby greatly improving the efficiency of TCR mimic antibody discovery.



ELISA validation shows that the Chimeric HLA-A02:01($\alpha 3$)&mB2M&GP100 (YLEPGPVTA) Monomer can bind to the GP100 TCR&Anti-CD3 Bispecific Fusion. Its activity is comparable to the non-chimeric HLA-A02:01&B2M&GP100 (YLEPGPVTA) Monomer and superior to that of the chimeric monomer without engineering.

Request Custom MHC

To request custom MHC expression services, contact support@kactusbio.us.



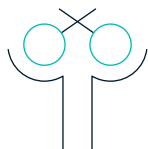
Learn More

Soluble TCR Expression Services

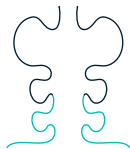
To complement our MHC expression expertise, KACTUS also provides custom production services of soluble TCRs and TCR fusion proteins.

Our expert team will provide one-stop solution from plasmid establishment to protein production, as well as binding affinity testing via ELISA or our SPR analysis services for customized TCRs.

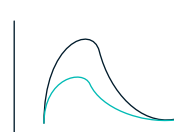
Service Features



Production of various formats of soluble TCRs, including scFv-TCR, TCR-His, etc.



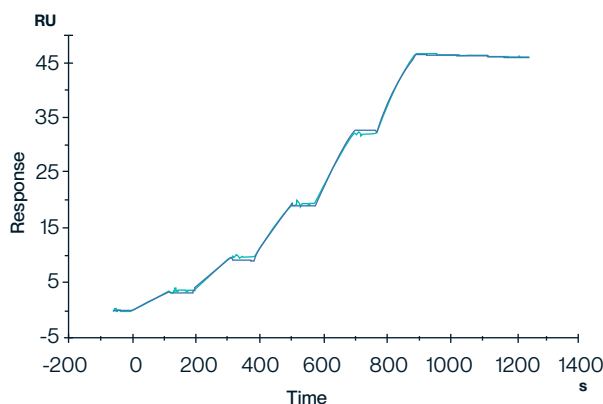
TCR engineering to optimize soluble TCR expression based on TCR modeling



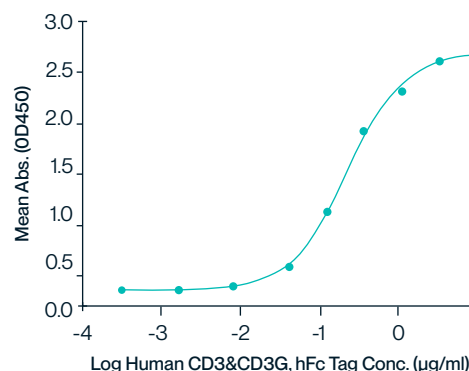
SPR or ELISA analysis of soluble TCR & MHC interactions

GP100 TCR & Anti-CD3 Bispecific Fusion

We have successfully expressed a GP100 TCR & Anti-CD3 Bispecific Fusion, which can not only bind to HLA-A*02:01&B2M&GP100 (YLEPGPVTA) complex, but also to CD3 heterodimers at the same time, demonstrating good bispecific binding activity.



GP100 TCR & Anti-CD3 Bispecific Fusion can bind to the HLA-A*02:01&B2M&GP100 (YLEPGPVTA) complex tetramer in SPR, with an affinity constant of 0.196 nM.



ELISA verification demonstrates that GP100 TCR & Anti-CD3 Bispecific Fusion can bind to Human CD3E&CD3G, with an EC50 value of 0.22 µg/ml.

Request Soluble TCR

To request TCR expression services, contact support@kactusbio.us



Learn More