OncoResponse

Interrogating for Cures™

Interrogating the human memory B cell repertoire to discover novel targets, epitopes, and therapeutic antibodies

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Tumor Myeloid-Directed Therapies Summit

June 14-16, 2022

Enhancing Target Identification & Validation to Take Aim at Therapeutically Significant Targets & Investigate their Functional Impact with RNASeq Bioinformatics Studies

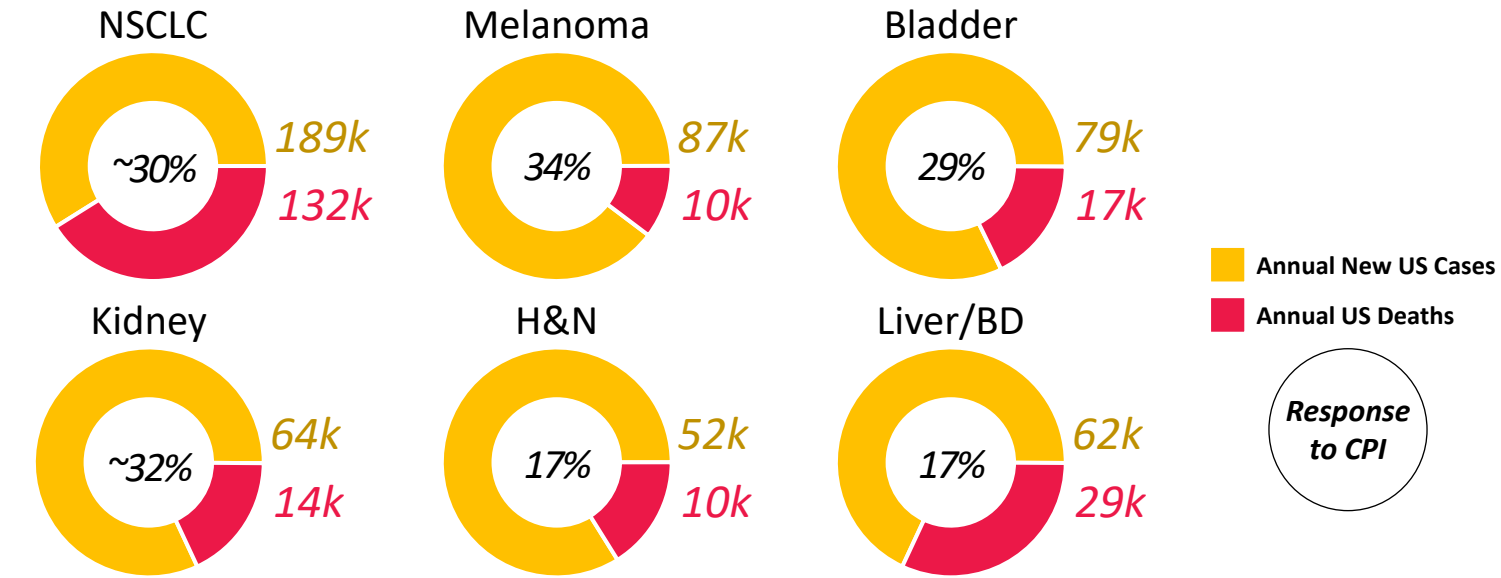
- Considering the desirable characteristics of myeloid cell targets, and contrasting the benefits and challenges of targeting different cellular mechanisms such as cross-presentation, polarization, and pathway modulation
- Defining the cause of immune suppression by myeloid cells, identifying master regulators, and discussing which processes in a signaling pathway can be effectively targeted
- Selecting targets on myeloid subsets which are tumor-specific
- Discussing the challenges of demonstrating single agent effect on target validation, and tips to overcome these
- Sharing in vivo target validation workflows, and exploring translational and preclinical data to support target validation alongside clinical proof of myeloid targeting
- Decoding RNA signals, discussing the contributions of RNA sequencing to the field, and highlighting remaining limitations

Workshop discussion questions

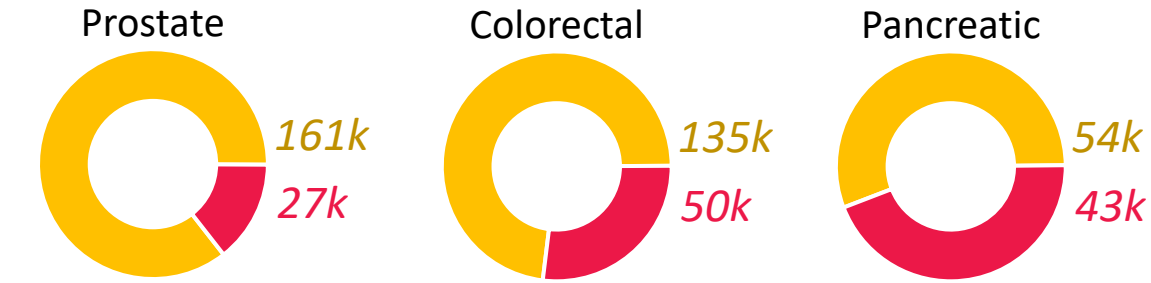
- What target discovery platform(s) are you using? What has worked and what are some of the challenges?
- How are you bridging the gap between mice and patients?
- What information are you using to select patients?
- How to utilize patient data in target discovery? What datasets are critically missing for target discovery?
- The problems and opportunities of combinatorial approaches in IO
- How to convince the world to invest into clinical development of the new targets?
- Advantages and pitfalls of narrow and broad applicability

The Immuno-Oncology opportunity

CPI-Responsive Cancer Types



CPI-Non-Responsive Cancer Types



- Response to checkpoint inhibitors (CPI) continue to be low due in part to the suppressive Tumor Microenvironment (TME)
- Large unmet need to overcome immunosuppression of the TME to increase response and survival
- OncoResponse: Discover new therapies that leverage the immune system to attack cancer
  - Rare antibodies from Elite Responders that modulate immunosuppression in the TME
  - Used as single agent or in combination with CPI to improve patient outcomes

OncoResponse

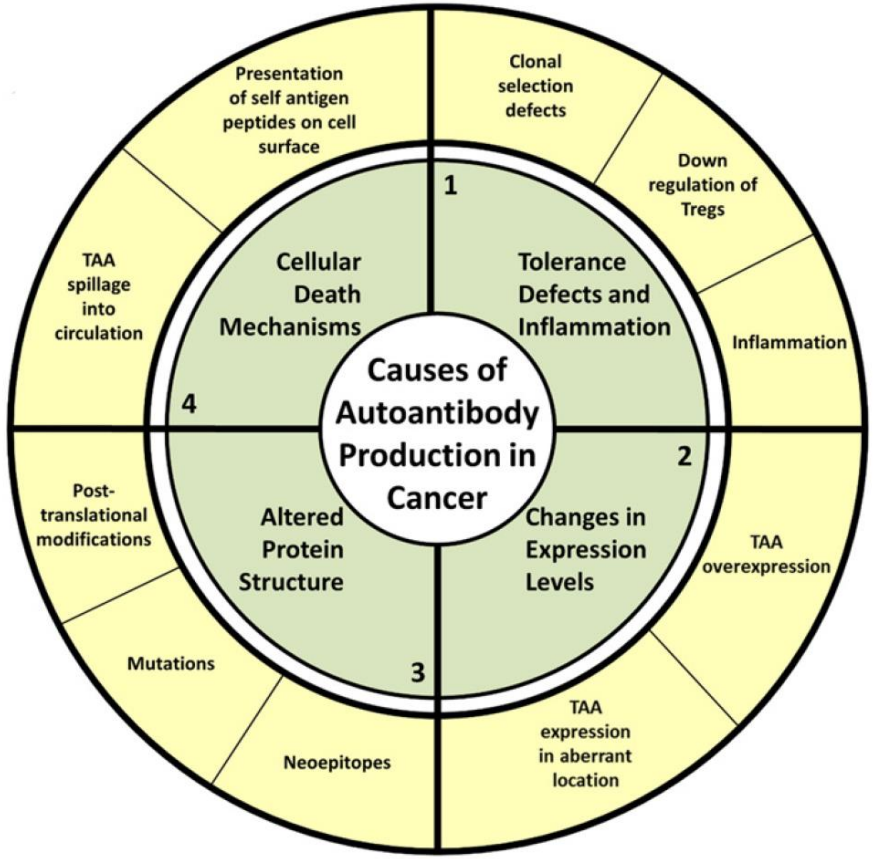
Our Mission

Attack cancer based on clues offered by the immune systems of Elite Cancer Responders

Autoantibodies in cancer

The humoral immune response toward autologous antigens in cancer patients

- **De novo autoantibodies in cancer patients**
  - Defects in tolerance and inflammation
    - Downregulation of regulatory T cells
    - Clonal selection defects
  - Changes in protein expression levels
    - Overexpression of the corresponding antigen
    - Aberrant expression site of the corresponding antigen
  - Altered protein structure
    - Neoepitope exposure
    - Mutations
    - Post-translational modifications
  - Cellular death
    - Presentation of self-antigen peptides on cell surface
    - Tumor-associated antigens spillage into circulation
- **Preexisting antibodies due to autoimmune disorders**



Zaenker P. et al. Autoimmunity Reviews 2016,15:477-483

Leveraging Elite Responders to checkpoint inhibitors

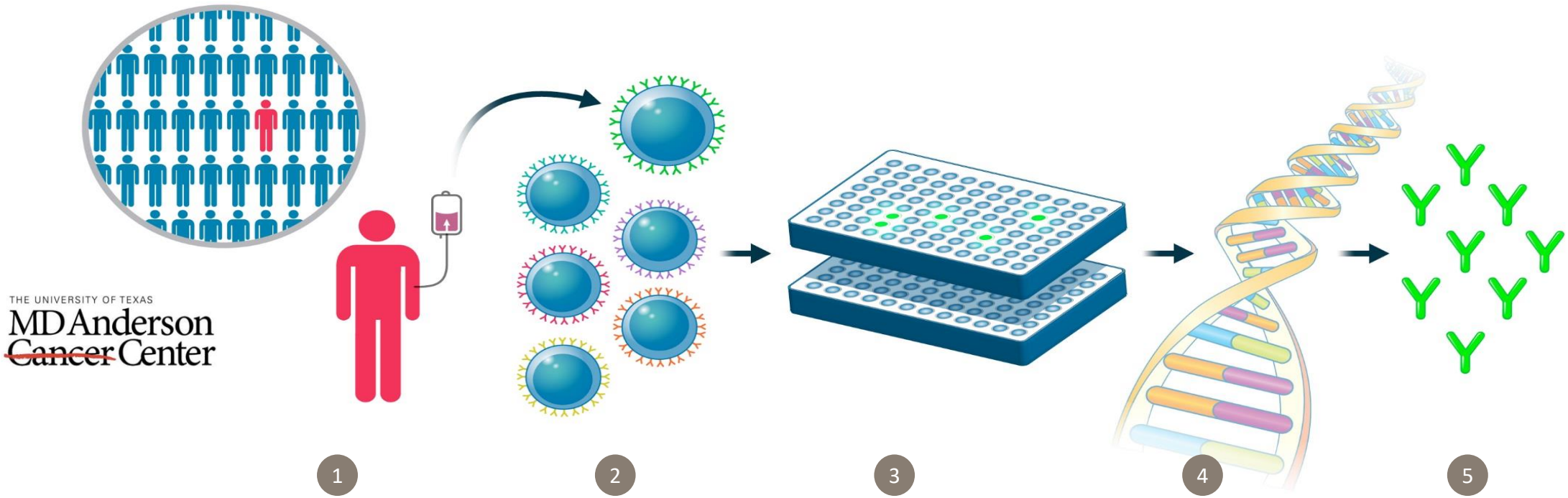
Opportunity to discover novel targets, novel epitopes, and potential biomarkers

- Interrogation of humoral responses in Elite Responders to checkpoint inhibitors
  - Generalized immunorestorative activities of CPI
  - CPI directly affect B cell responses and induce autoantibody production
  - Develop enhanced antibody response to more antigens than non-responders
  - Show presence of antibodies to clinically relevant targets

Schoenfeld, et al. Cancer Res. 2010, Kwek, et al. J Immunol. 2012, Kouo, et al. Cancer Immunol Res. 2015, GuhaThakurta, et al. Clin Cancer Res. 2015, Postow, et al. N Engl J Med. 2012, Jinushi, et al. Proc Natl Acad Sci U S A. 2006, Reuschenbach, et al. Cancer Immunol Immunother. 2009

The OncoResponse platform interrogates the entire B-cell repertoire

Access to Elite Responders → Identify functional Abs inaccessible to other Ab discovery platforms → Develop therapeutic mAb candidates



1. Blood/PBMC Collection "Archive of immunological history"
2. IgG/A^{+} memory B-cell activation
3. Rapid functional screening identifies clones with desired properties
4. Deep sequencing of positive clones
5. Recombinant antibodies

Validated antibody platform delivered preclinical and clinical stage antibodies

Hallmarks of OncoResponse human antibody discovery platform

Core Technology	• Prolonged B cell viability • Robust proliferation and differentiation into plasmablasts • Shedding of antibodies in culture supernatants
Unparalleled Flexibility	• Multiple screening paradigms for rapid discovery of functional antibodies • Target-dependent and target-agnostic functional phenotypic screens • Both dominant and rare antibodies to known or novel epitopes
Broad Application	• Oncology, immuno-oncology, infectious diseases, autoimmunity, fibrotic disorders • Immune-excluded and immune-desert phenotypes that generally don't respond to CPI • Superior to other platforms which focus on dominant clonal families and lack function-based screening

OncoResponse human antibody discovery platform

A unique opportunity to discover novel targets, epitopes, and potential biomarkers

- **Discovery of Abs that target immune cells and relieve suppression in the TME**
  - Primary screen of binding to immune cells
  - Functional screen for immune modulation
  - Binding to known immunomodulatory targets
- **Antibodies that directly target tumor cells**
  - Fc-mediated effector function
  - Internalization for ADC or AIC development
  - Direct inhibition of cancer cell growth/proliferation
  - Precursor to further engineering (CAR-T, bi-specific, etc.)
- **Discovery of Abs to target “immune excluded” and “immune desert” cancer phenotypes**
  - Primary screen of binding to stromal cells or cancer-associated fibroblast (CAF) subtypes
  - Functional screen for modulation of tumor-CAF-immune cell crosstalk

OncoResponse

Example Case Study #1

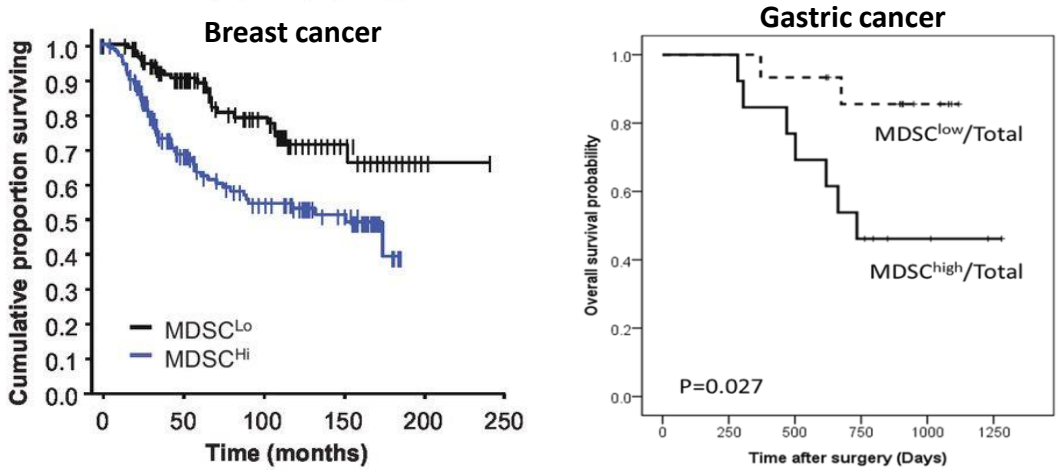
Discovery of OR2805 to relieve immunosuppression caused by TAMs

(Target agnostic cell-based functional phenotypic screen)

Rationale for targeting tumor associated macrophages (TAMs)

- **M2 TAMs** create a highly **immunosuppressive** environment promoting tumor growth
- TAMs are central to treatment resistance
  - Presence of **M2 macrophages** correlates with **poor patient prognosis**
  - Presence of **M1 macrophages** correlates with **better patient outcomes** and response to immunotherapies
- **Repolarization** of M2 TAMs to M1 phenotype **relieves immunosuppression** and **enhances anti-tumor** activity
- Targeting TAMs has shown promising preclinical results
- Emerging clinical data support targeting TAMs for anti-cancer therapy

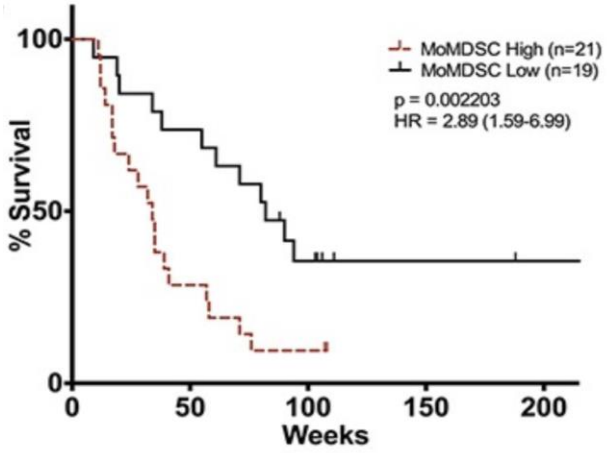
Tumor tissue MDSCs correlate with outcomes



Peng et al Cancer Res, 2016

Choi HS et al, Oncotarget, 2016

Survival benefit with anti-CTLA-4

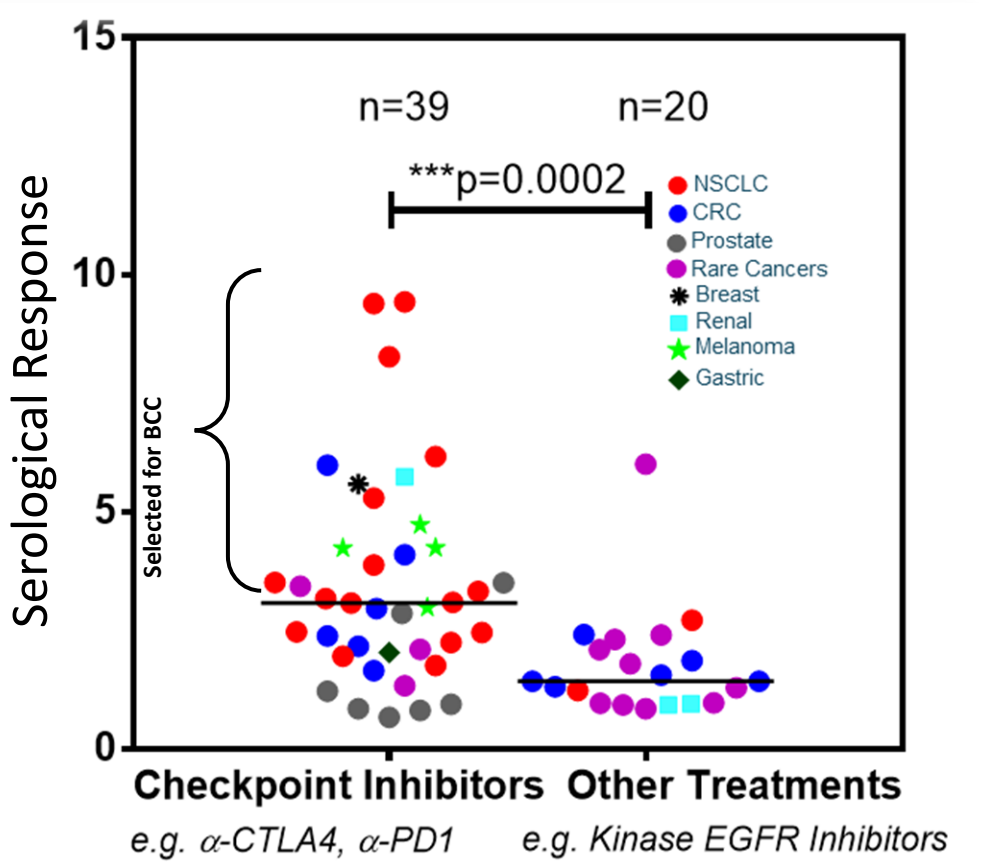


Coana et al. Oncotarget 2017,
Weber et al. Cancer Immunol Res 2016

Nature Medicine 2015;21:938, Nat Rev Drug Discov. 2018;17:887, Cancer Cell 2019;35:885, Cell 2017;171:934, J Clin Invest. 2017;127:2930, J Clin Invest. 2018;128:5647, Nat Med. 2019;25:656, Nature Medicine 2015;21:117, Front Immunol. 2018;9:70, J Immunol Res. 2014;2014:659294

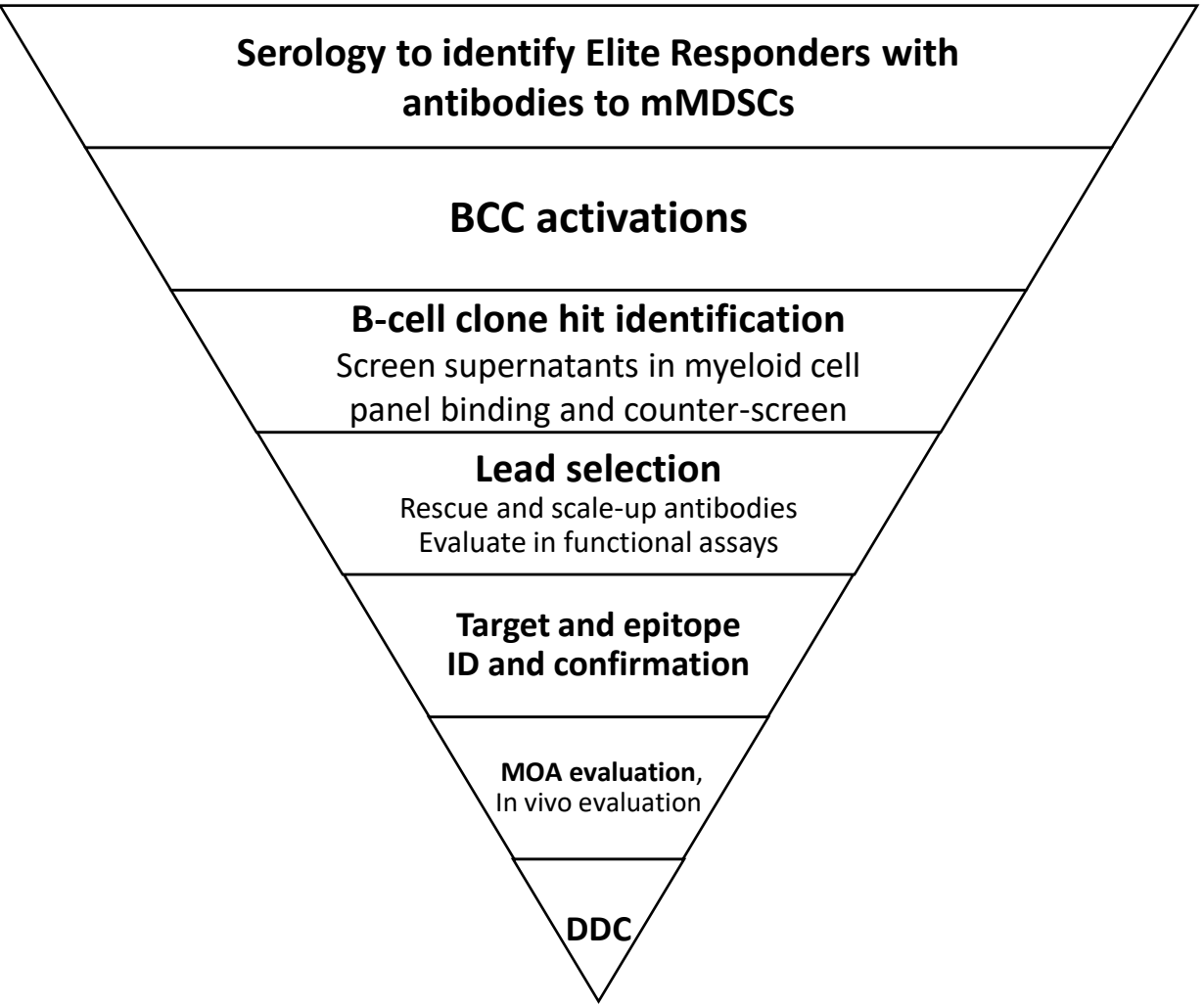
Elite Responders show autoantibody responses to immunosuppressive TAMs

MDSCs serology on Elite Responders



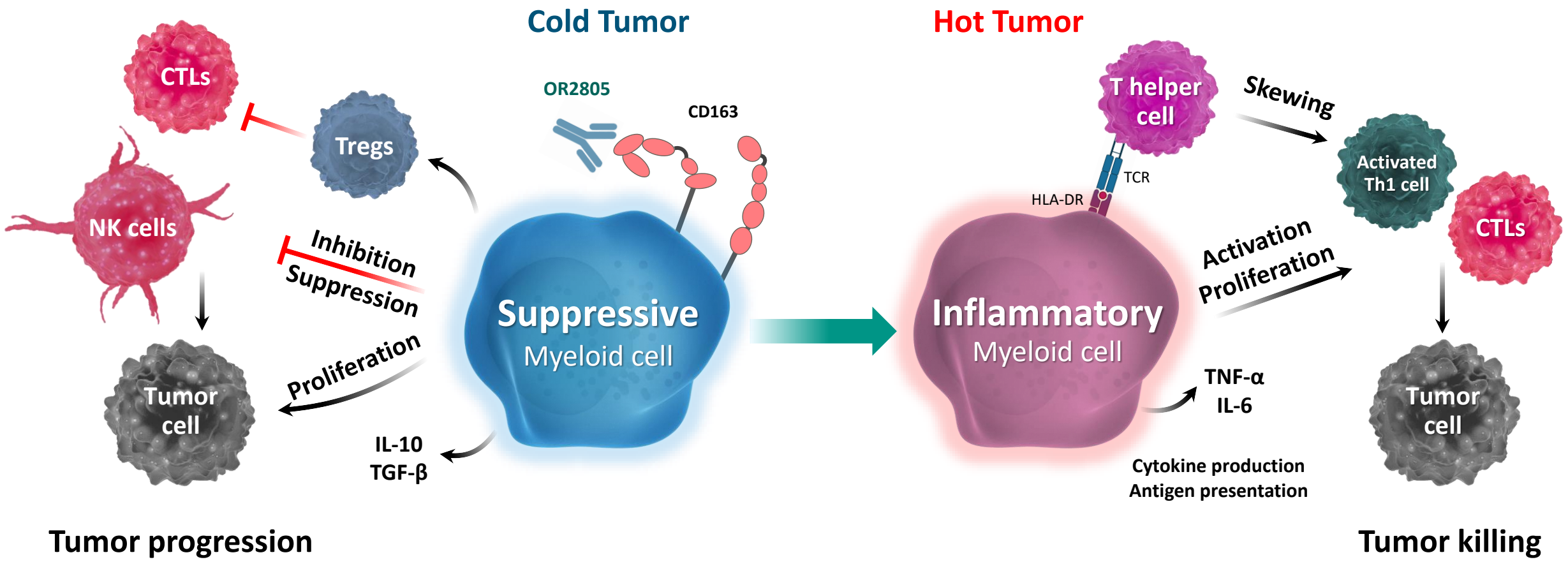
- CPI-treated Elite Responders show increased serology response to mMDSCs
- All patients in study had ≥ 6 months durable clinical response (CR, PR, or SD)
- mMDSC seropositive patients were selected for Ab discovery
  - Target ID using protein microarrays
  - Antibody discovery using BCC

TAM-targeting antibody discovery program workflow



- Selected Elite Responders with serum antibodies to mMDSCs for B-cell activations (BCC)
- Tested BCC supernatants and selected B-cell wells for cloning based on myeloid panel binding profiles
- Identified & assembled VH and VL chains for mAb expression and hit confirmation using purified mAbs
- Selected OR2805 as lead mAb based on activity in various functional assays
- Identified the target, elucidated the binding epitope and characterized the mechanism of action
- Nominated OR2805 for IND

OR2805 relieves immunosuppression caused by myeloid cells in the TME



OR2805 targets CD163 and reprograms M2 macrophages resulting in the loss of M2 cell-mediated immune-suppression

CD163 - Normal physiology and role in cancer

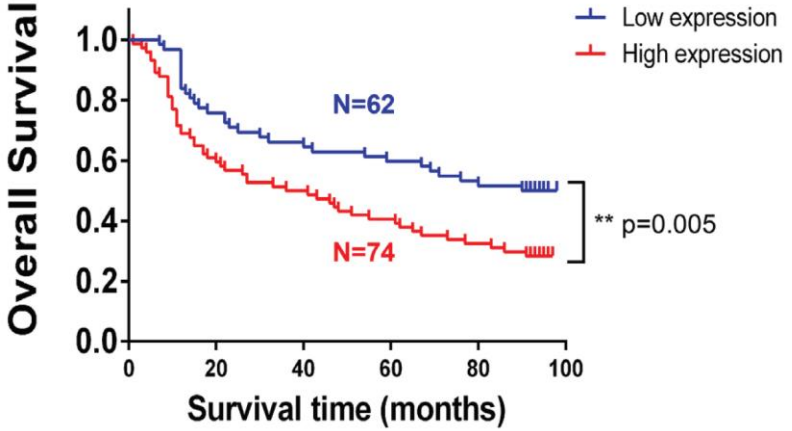
- Expression predominantly limited to and upregulated on immunosuppressive macrophages[1]
- Binding by its ligands induces secretion of immunosuppressive cytokines [2,3]
- Inhibits T-cell proliferation [4,5]
- Overexpression in human macrophages results in an M2 phenotype[6]
- Knockout mice develop normally but have impaired tumor implantation[7]
- Expression in tumors correlates with poor survival [8-11]

[1]Genomics Institute of the Novartis Research Foundation, [2]Molecular Immunology 2010;47:1650, [3]JCI Insight. 2016;1:e85375, [4]Biochem Biophys Res Commun. 2001;288:841,[5]Scientific Reports 2017;7:12940, [6]Immunobiology 2017;222:900, [7]Cancer Res 2018;78:3255, [8]Clin Transl Immunology 2020;9:e1108, [9]Cancer Management and Research 2020;12:5831, [10]Cell 2016;165:35, [11]J Exp Med. 2019;216:2394.

CD163 is a negative prognostic marker in cancer

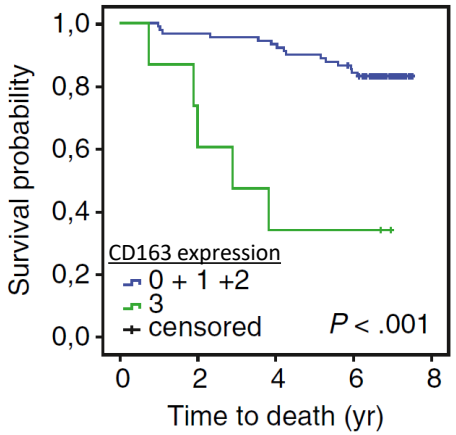
Gastric Cancer[1]

Overall survival



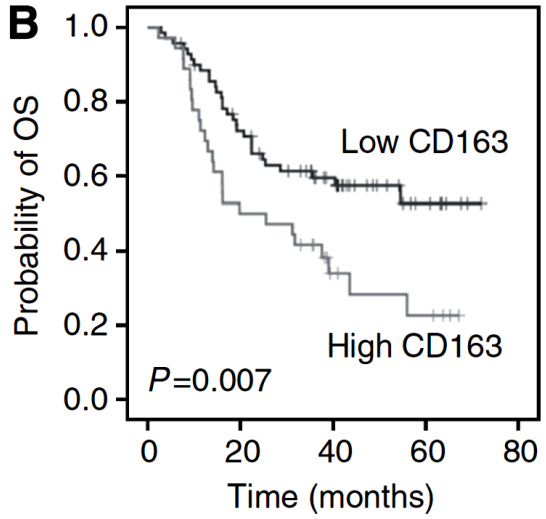
Breast Cancer[2]

Survival probability

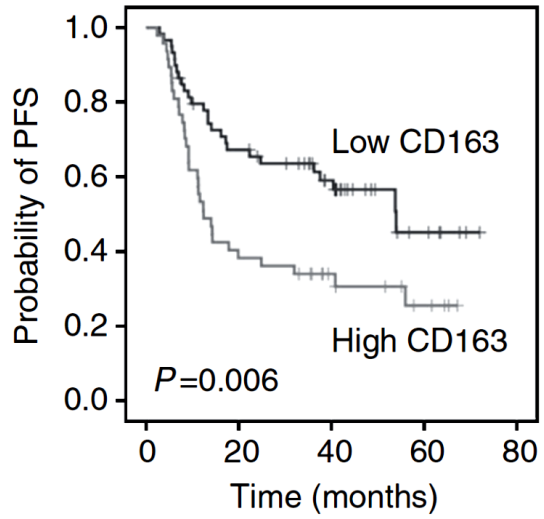


Head and Neck Cancer[3]

Overall survival

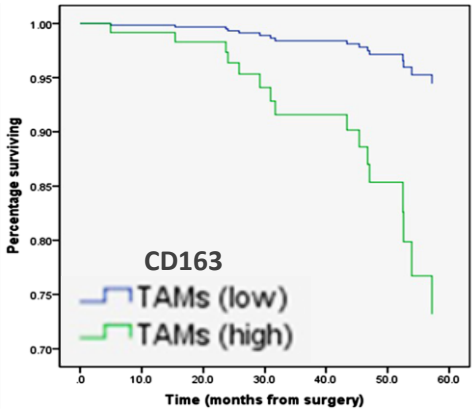


Progression-free survival

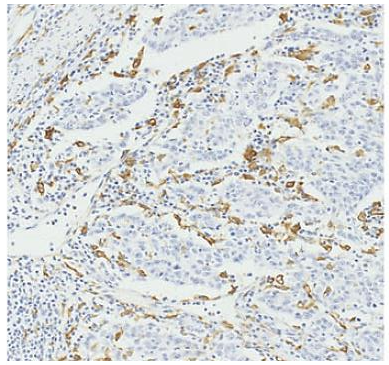


Colorectal Cancer[5]

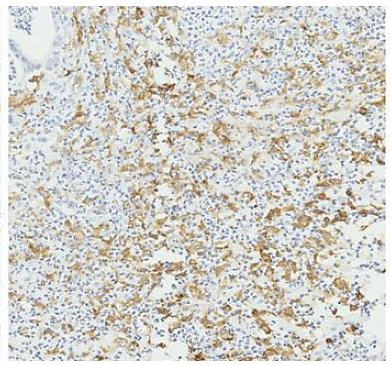
Overall Survival



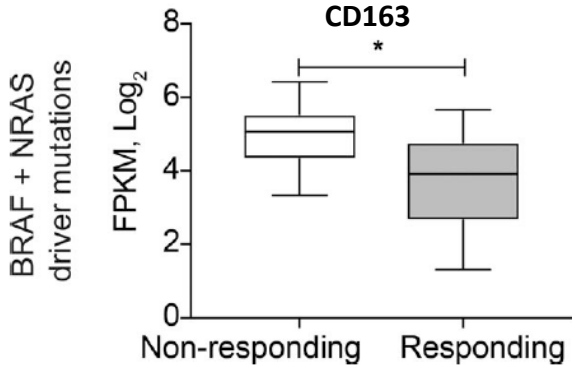
Low TAM Infiltration

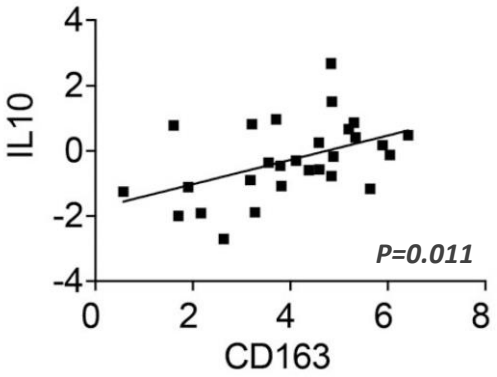


High TAM Infiltration



Melanoma patients on anti-PD-1 therapy[4,6]

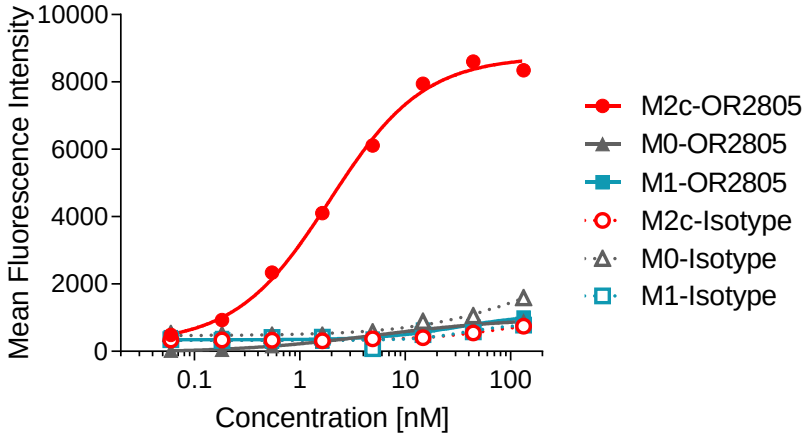


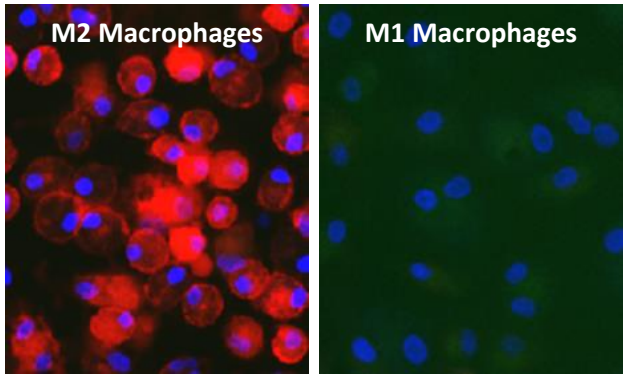


[1]*Oncotarget 2017;8:87244,* [2]*BMC Cancer 2012;12:306,* [3]*Br J Cancer 2014;111:1509,*[4]*J Exp Med. 2019;216:2394,*[5]*World J Surg Oncol. 2021;19:186,* [6]*Cell 2016;165:35.*

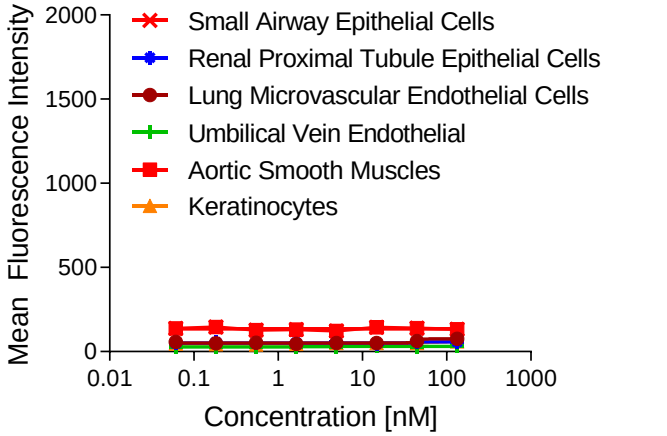
OR2805 demonstrates specific binding to immunosuppressive myeloid cells

Specific binding to human immunosuppressive myeloid cells



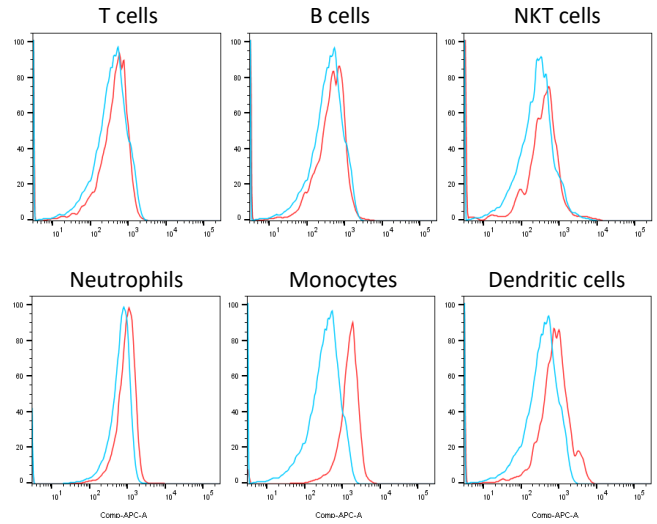


No binding to a panel of human cell types



Binding to TAMs in dissociated NSCLC tumors

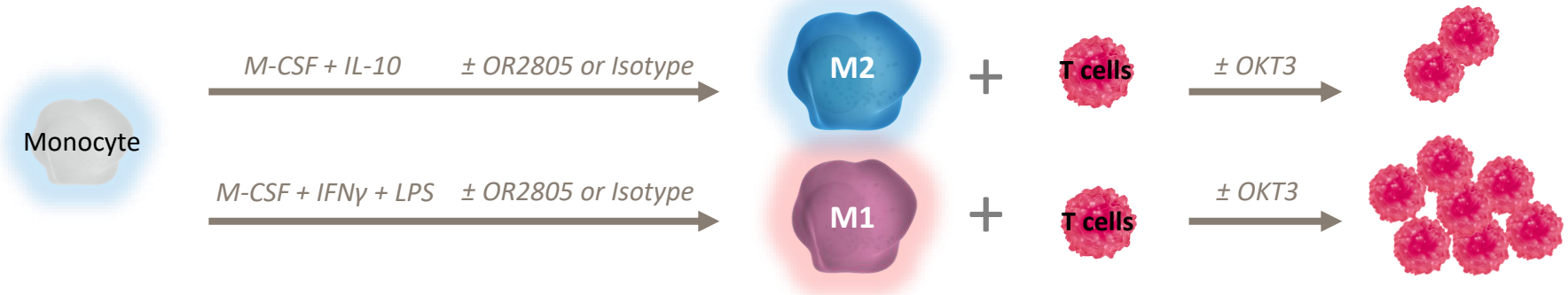
Cell surface markers	Patient 1 cells (%)	Patient 2 cells (%)
Total $CD14^+$ (monocytes)	26	30
$CD163^+$ of $CD14^+$ (M2c)	69	88
$OR2805^+$ of M2c	**82**	**77**
$CD163^-$ $CD80^+$ of $CD14^+$	20	11
$OR2805^+$ of $CD163^-$ TAMs	11	9

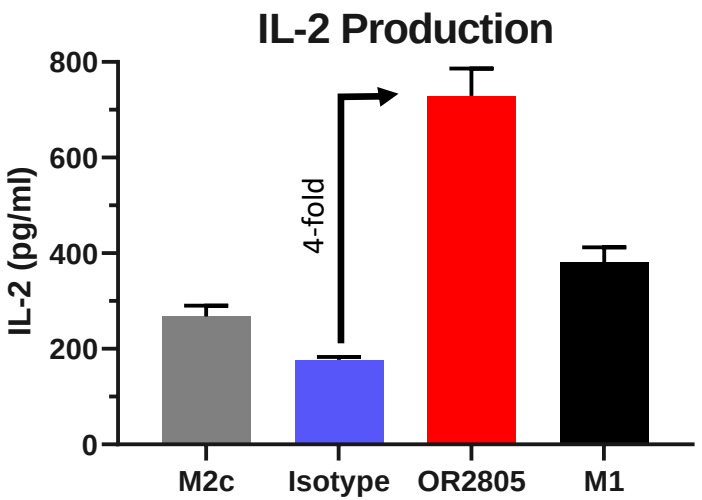


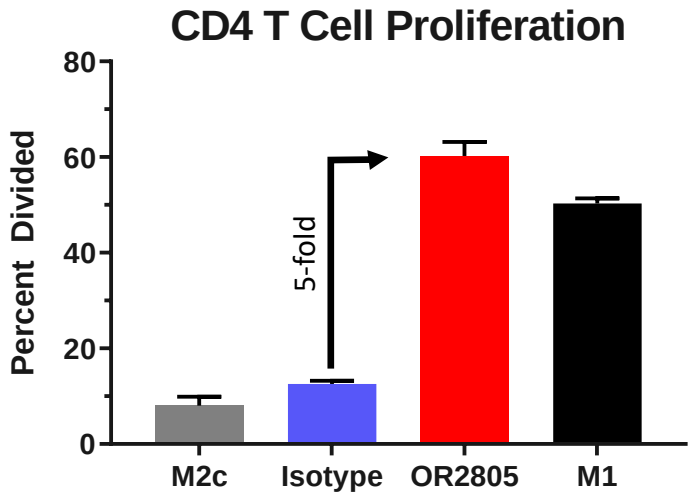
Representative data of 3+ donor

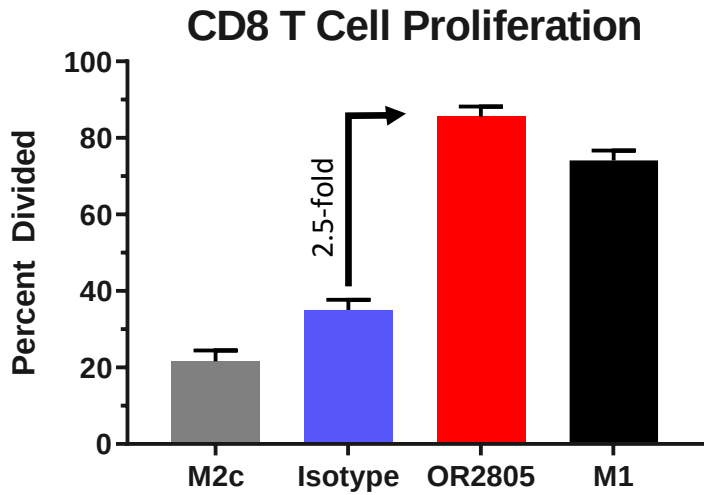
OR2805 has a potential to target immunosuppressive myeloid cells in the TME without impacting other cells

OR2805 treated M2c macrophages promote T-cell activation & proliferation







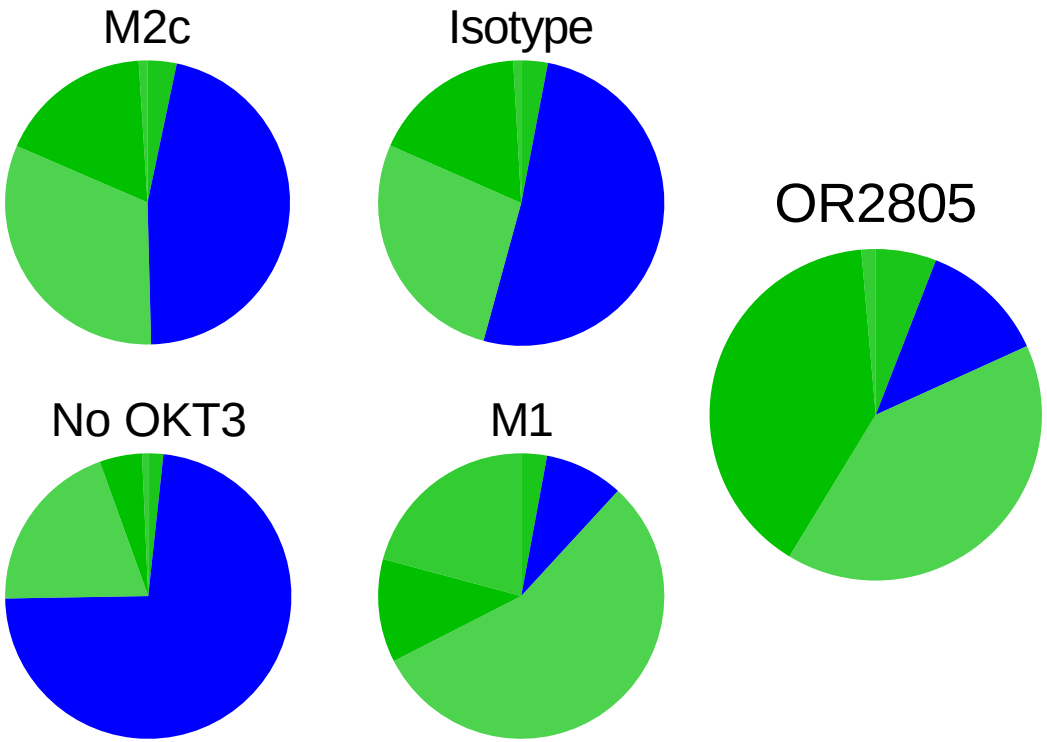


Representative data of 12+ donors

OR2805-treatment reduces the ability of M2c to suppress T-cell activation leading to greater T-cell stimulation (IL-2, IL-1β, IFNγ, TNFα, CCL4 & perforin production), and both CD4⁺ and CD8⁺ T-cell proliferation

OR2805-treated M2c macrophages skew T cells to activated Th1 phenotype

Distribution of CD4⁺ T cells phenotypes



- CXCR3 expression promotes CD8⁺ infiltration
- IFNγ enhances CXCR3-mediated T-cell recruitment
- CXCR3-expressing CD8⁺ T cells show enhanced anti-tumor cytotoxicity

Resting T cells

CXCR3⁻ CD69⁻ CD25⁻

Activated CXCR3⁻ T cells

CXCR3⁻ CD69⁺ CD25⁺

Activated CXCR3⁺ T cells

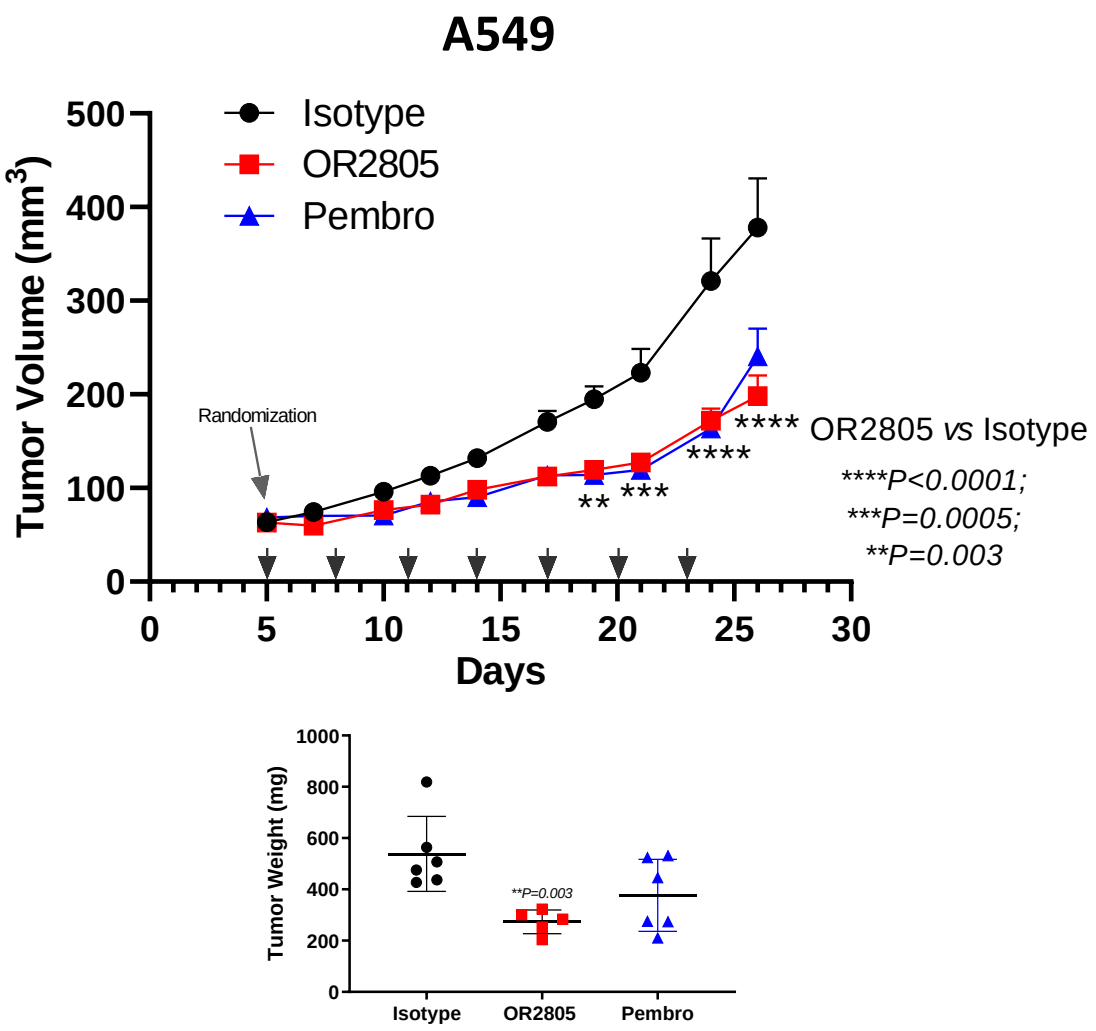
CXCR3⁺ CD69⁺ CD25⁺

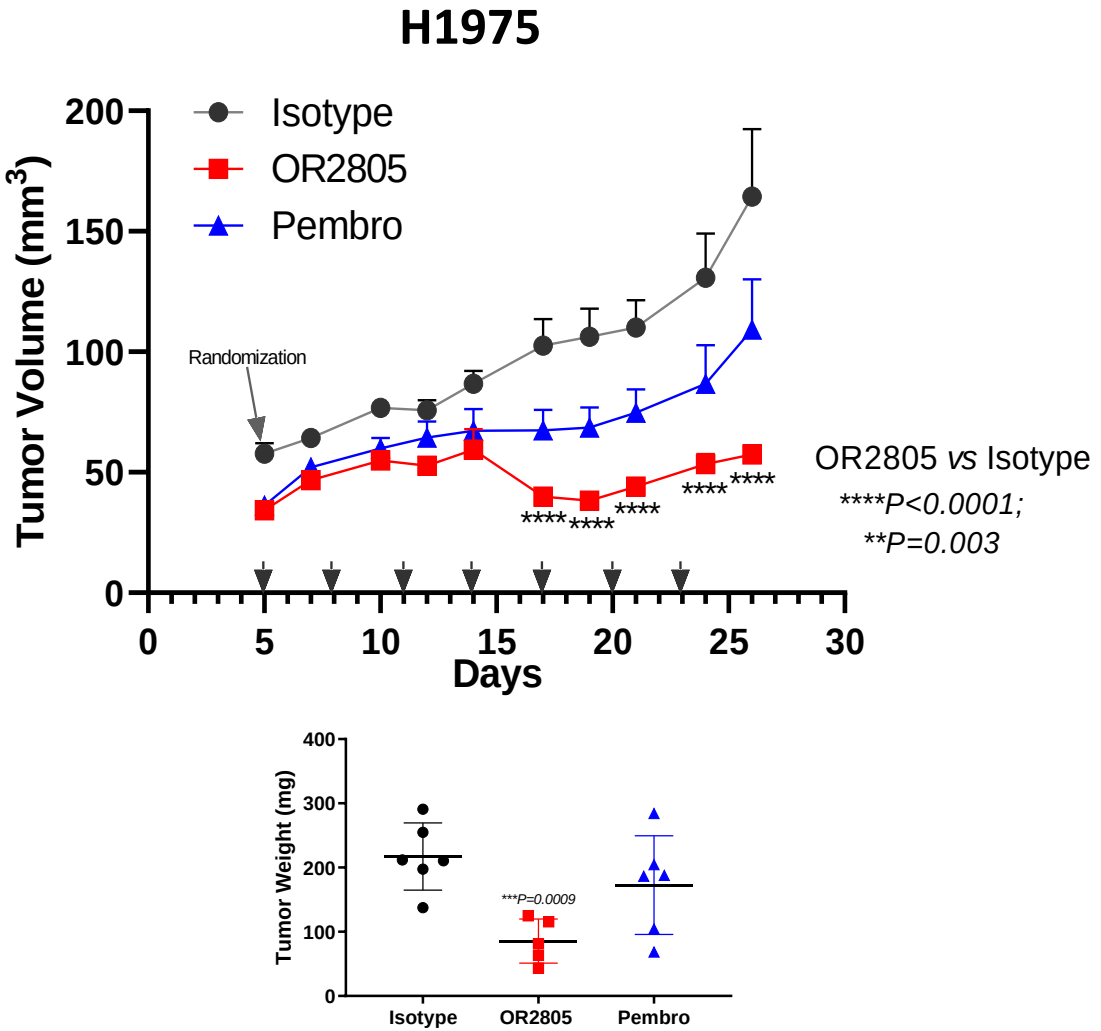
CXCR3⁺ CD69⁺ CD25⁻

CXCR3⁺ CD69⁻ CD25⁺

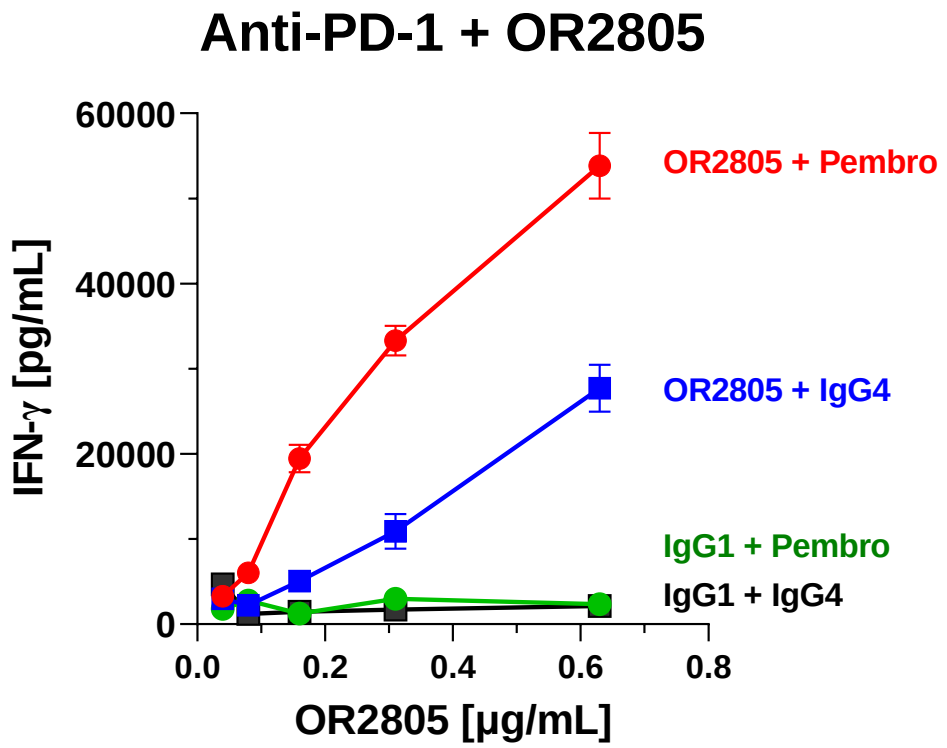
OR2805-treated macrophages promote T-cell activation leading to greater expression of T-cell activation markers (CD69, ICOS, OX40)

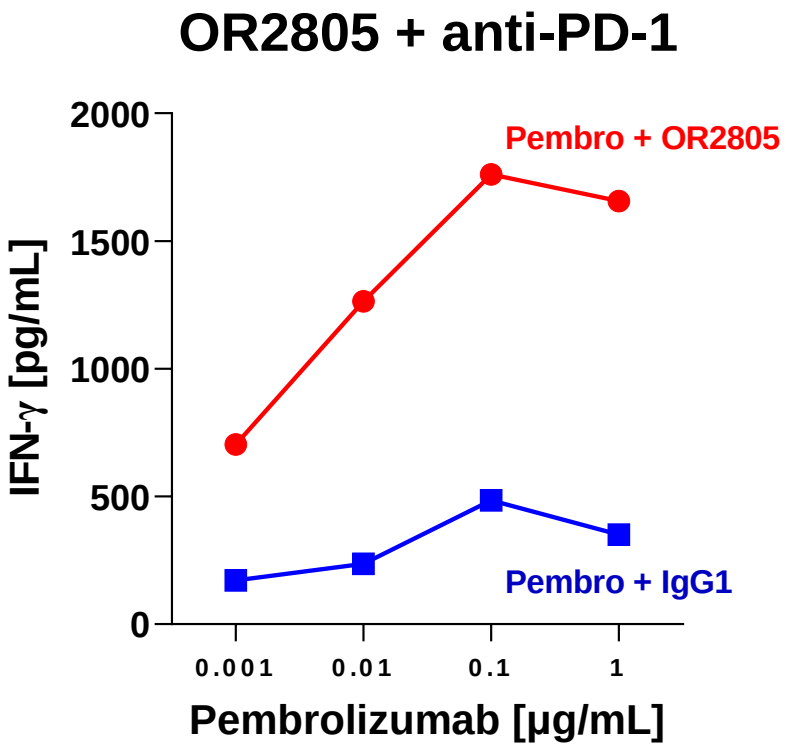
OR2805 induces anti-tumor activity in humanized NSG-SGM3 mice





Combination with OR2805 enhances activity of anti-PD-1 in M2c/Exhausted T cell coculture assays

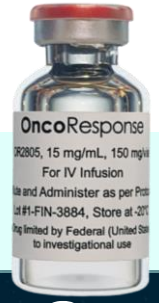




OR2805 has the potential as a single agent or in combination with CPI to increase the number of patients who may benefit from immunotherapy

Summary: OR2805 relieves immunosuppression caused by myeloid cells in the tumor microenvironment

- Binds with high specificity to M2 TAMs
- Minimizes M2 suppressive effect on T-cell activation and proliferation and skews T cells towards anti-tumor Th1 phenotype
- Shows enhanced expression of activation markers and cancer-killing ability in cocultured T cells
- Demonstrates robust anti-tumor activity in lung cancer xenograft models
- Combination with OR2805 amplifies anti-PD-1 activity in coculture assays
- A phase 1-2 dose escalation-expansion study of OR2805 alone or in combination in subjects with advanced solid tumors is ongoing (NCT05094804)



OR2805 has therapeutic potential as a single agent or in combination with checkpoint inhibitors

OncoResponse

Example Case Study #2

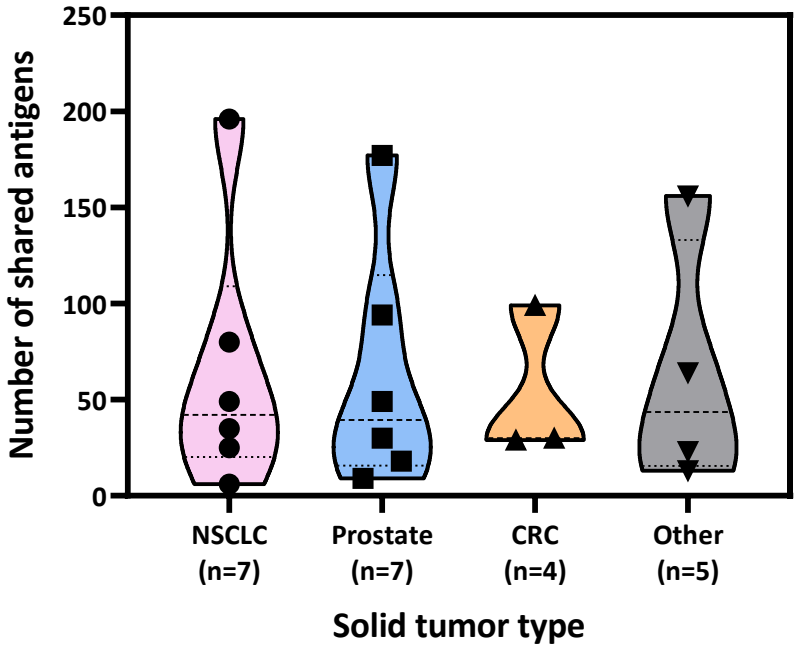
Targeting Leukocyte Immunoglobulin-Like Receptor B2 (LILRB2/ILT4)–HLA-G binding to reverse immunosuppression in cancer

Seromic analysis identified potential targets for cancer treatment

Serum antibodies in Elite Responders (representative of >22K antigens)

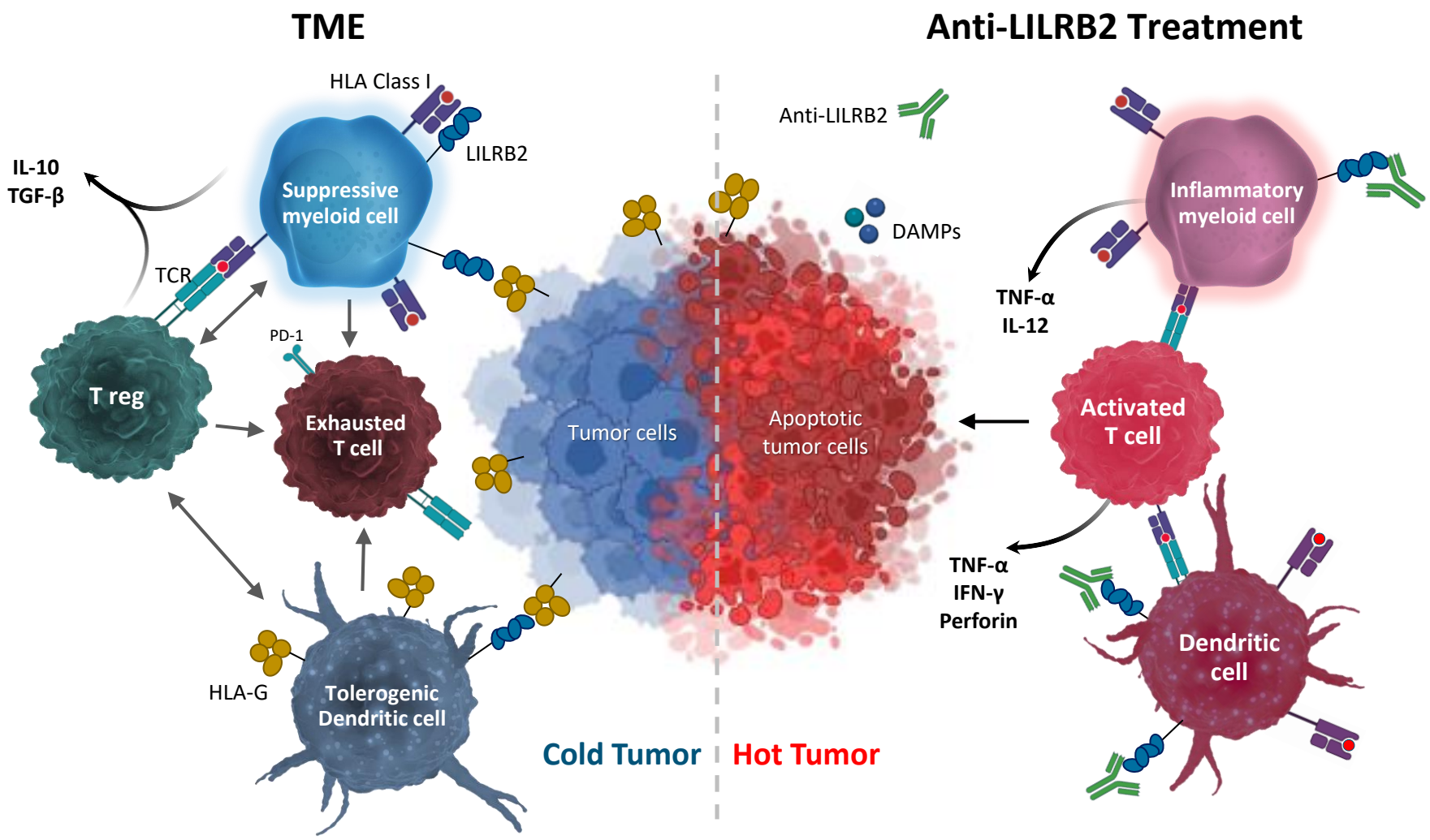
Name/ID	Healthy					NSCLC							Prostate							CRC			
	[3001]	[3002]	[3003]	[3004]	[3005]	[21020]	[27011]	[27023]	[27033]	[27035]	[27050]	[27051]	[28002]	[28010]	[28011]	[28013]	[28020]	[28021]	[28030]	[27015]	[27018]	[27019]	[27027]
JHU02528.P027A05	0.6	0.4	0.9	1.1	1.4	0.8	2.0	5.5	2.3	3.5	3.2	1.0	0.5	2.0	2.7	5.4	1.1	6.6	0.8	1.1	0.8	0.0	0.4
JHU09086.P095G05	0.5	0.5	0.9	0.8	0.6	3.3	4.7	1.4	1.5	1.7	9.7	0.5	2.2	4.1	25.4	1.3	0.9	3.5	2.2	1.7	2.4	2.0	1.5
JHU12430.P130B03	0.6	1.4	1.9	1.5	0.8	34.2	2.7	2.3	4.3	1.0	0.7	1.2	4.4	8.7	0.3	10.9	1.6	2.3	0.1	1.2	0.7	0.8	1.4
JHU00996.P011C09	-0.3	-0.1	-0.2	-0.2	-0.3	3.1	11.1	34.5	27.4	27.0	23.5	7.2	0.3	3.6	0.3	0.4	-0.2	-0.1	-0.1	-0.2	-0.2	0.2	0.3
JHU07543.P079C04	0.5	0.2	0.8	1.1	0.8	0.0	3.7	9.7	5.2	27.0	16.5	3.7	0.5	0.1	0.0	0.1	1.6	3.5	0.6	0.4	0.4	1.4	0.8
JHU08928.P094B12	0.5	0.6	1.1	1.5	0.7	0.6	1.0	2.3	0.7	1.1	1.2	3.1	0.3	0.4	0.5	2.3	3.8	2.6	1.0	1.2	1.0	0.4	0.7
JHU10186.P107H06	1.1	1.3	1.9	2.0	1.0	0.7	0.2	0.7	0.7	0.3	0.4	1.7	0.5	0.0	0.5	1.0	2.1	3.6	1.0	0.6	1.9	2.2	3.1
JHU12189.P128A08	-0.1	-0.1	-0.1	0.3	-0.1	0.1	9.0	4.0	3.2	7.3	4.9	3.5	-0.1	-0.2	-0.1	-0.1	0.3	0.0	-0.1	0.0	-0.1	0.0	-0.1
JHU14956.P157H06	1.4	1.4	1.9	0.8	1.3	1.2	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	1.6	6.3	2.5	1.4	9.9	3.8	2.1	1.1	7.1	2.0	0.2
JHU13371.P140E03	0.2	0.8	0.5	0.4	0.2	0.4	-0.1	-0.1	2.0	-0.1	-0.3	0.0	7.0	2.2	1.4	0.3	0.7	0.5	3.0	0.2	0.7	2.0	-0.1
JHU13648.P143F01	0.5	0.2	0.2	0.3	0.6	0.3	3.5	1.7	2.1	2.6	2.4	1.9	0.2	0.8	0.1	0.0	0.5	0.3	0.1	0.1	0.2	0.1	0.2
JHU13741.P144G08	0.8	0.4	0.3	0.2	0.5	0.4	1.7	2.6	3.6	2.6	2.0	3.3	0.5	1.7	0.3	1.5	1.2	0.1	0.4	0.9	0.8	0.4	0.3
JHU15414.P162E05	1.3	0.9	1.8	1.5	1.5	3.1	0.5	2.6	1.2	1.3	1.7	0.8	2.9	1.7	1.9	1.1	2.9	1.5	2.0	2.3	1.9	1.1	0.7
JHU18189.P209G02	1.4	0.2	0.8	1.0	1.6	0.5	0.6	1.3	2.5	2.6	1.3	0.8	2.6	0.3	0.1	0.7	1.3	8.4	1.0	0.5	0.5	0.7	1.5
JHU19371.P197G01	0.2	0.1	0.0	0.6	0.4	3.9	0.4	0.7	1.3	0.1	4.5	-0.2	0.0	0.2	0.0	0.1	2.4	0.2	0.4	2.3	0.2	4.0	7.8
JHU14022.P180D12	0.3	1.3	0.3	0.6	0.3	0.9	0.1	2.3	0.7	3.1	5.7	0.2	0.3	0.6	0.1	0.8	1.5	0.7	0.4	0.3	0.9	0.4	1.0
JHU04143.P044A08	0.1	0.0	0.1	0.1	0.2	0.1	2.2	1.0	0.9	2.0	1.1	1.4	0.6	0.4	0.0	-0.1	0.2	0.0	0.0	0.3	0.1	0.0	0.0
JHU04547.P048A12	-0.2	-0.2	-0.2	-0.2	-0.3	-0.2	2.6	1.1	1.3	1.6	2.8	1.6	0.0	-0.2	-0.1	-0.1	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
JHU18292.P210H01	0.9	0.4	0.8	0.6	0.8	0.6	0.6	1.3	3.3	1.5	4.0	0.5	0.7	1.7	0.3	0.6	1.6	4.3	1.3	2.1	0.3	1.1	0.4
JHU04773.P050H07	-0.2	0.0	-0.1	-0.2	-0.2	-0.2	1.3	3.0	1.5	2.7	2.2	0.3	-0.1	-0.2	-0.1	0.0	-0.2	-0.1	0.0	-0.1	-0.2	-0.2	-0.1
JHU05076.P053B11	0.0	-0.1	0.0	-0.1	0.3	0.4	5.2	0.4	3.5	3.3	1.4	7.4	0.0	-0.2	-0.1	9.9	0.1	-0.2	0.0	-0.1	0.2	0.3	0.0
JHU05254.P055E01	0.3	0.1	0.1	0.2	0.4	2.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	19.5	0.2	2.8	0.1	0.2	2.3	3.1	0.1	0.5	0.0	1.9
JHU05626.P059D11	0.2	0.3	0.7	0.5	0.4	1.4	2.2	1.1	1.5	1.1	6.2	0.8	1.4	0.0	1.2	0.2	0.6	0.3	0.7	0.3	0.1	0.5	0.2
VSIG1	0.0	0.2	0.3	0.1	0.1	0.6	0.2	0.2	0.3	4.7	0.6	1.8	0.4	1.7	0.2	12.7	0.0	0.0	0.3	0.2	2.8	0.0	0.8
JHU06551.P069G07	0.6	0.6	1.1	0.8	0.8	1.4	0.7	6.3	1.9	1.8	1.9	1.2	2.5	2.2	2.0	1.3	2.1	0.7	1.7	1.3	1.1	0.6	0.4
JHU06753.P071A10	-0.2	-0.1	-0.1	-0.1	-0.2	-0.2	3.0	0.6	1.4	0.9	2.3	1.5	-0.2	-0.2	-0.1	-0.1	0.0	-0.2	-0.1	-0.2	-0.2	-0.1	-0.1
JHU07204.P076F09	0.0	-0.1	0.0	0.0	0.0	1.5	0.2	7.6	3.9	4.3	16.7	0.1	0.1	0.0	0.0	-0.1	0.2	0.1	-0.1	0.1	0.1	1.8	3.9
JHU07348.P080A09	0.8	0.4	0.4	0.7	1.1	0.8	0.1	0.4	0.5	0.2	-0.1	0.2	1.6	0.3	0.3	0.0	1.8	0.3	6.5	0.4	2.3	2.7	0.3
JHU08036.P084H04	0.8	0.5	0.5	0.8	1.1	0.3	0.7	4.1	3.1	2.0	1.2	0.3	0.4	0.4	0.2	0.1	2.1	0.9	0.4	1.8	0.9	0.4	0.4
JHU08371.P088H07	0.8	0.7	0.2	0.9	1.3	5.7	5.0	0.4	0.4	0.1	0.0	0.2	0.9	0.8	0.4	0.6	1.5	0.5	0.5	5.1	0.2	2.8	0.4
JHU08508.P089F11	0.9	1.4	1.0	1.3	0.8	2.3	0.2	0.3	0.2	3.9	1.3	0.5	1.1	0.3	0.8	1.6	2.0	0.9	1.2	2.0	0.6	0.5	1.2
JHU09048.P095E04	0.5	0.1	1.3	0.5	1.6	-0.2	-0.1	0.0	0.4	0.1	-0.2	-0.1	-0.3	-0.3	-0.2	-0.3	1.8	5.1	0.7	0.5	4.7	0.2	1.4
JHU06828.P072F03	0.7	0.1	0.3	0.4	0.9	0.9	12.6	3.8	1.5	1.6	0.2	0.6	0.6	0.6	0.3	1.4	2.9	0.5	0.8	1.5	0.7	0.5	0.1
JHU09285.P097F06	0.1	0.2	0.4	0.2	0.3	0.6	-0.2	-0.2	-0.2	-0.2	-0.3	-0.2	5.6	-0.1	0.1	0.1	2.1	0.7	6.9	0.4	0.4	0.3	0.4
JHU09332.P098C10	0.4	0.3	0.5	0.6	0.8	0.2	-0.1	-0.1	-0.1	2.3	0.0	0.0	1.3	-0.1	0.1	12.1	1.1	2.4	0.6	0.4	0.8	0.2	0.9
JHU10332.P108A03	0.1	0.2	0.2	0.3	0.2	3.2	0.6	0.1	0.7	0.3	1.2	0.1	0.5	0.5	0.3	3.1	0.5	0.0	0.2	7.2	0.1	0.8	0.1
JHU10427.P109C01	0.1	0.3	0.0	0.9	0.2	2.1	0.1	0.0	-0.2	0.4	0.1	0.3	1.0	2.5	-0.1	1.4	0.1	0.6	0.2	1.0	0.5	0.1	0.6
JHU11011.P115F10	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.0	0.3	0.1	0.5	0.1	0.6	3.5	0.0	0.0	0.0	0.0	0.0	27.5	0.1	0.1	-0.1
JHU11491.P120H11	0.6	0.4	0.3	0.5	0.5	0.5	0.2	0.1	0.3	0.4	0.9	2.0	0.2	0.0	1.3	1.5	0.9	0.3	0.3	0.6	1.0	2.4	0.4
JHU11589.P121F02	0.5	0.6	0.7	0.4	0.5	0.5	-0.1	0.0	0.0	-0.1	0.0	3.2	0.2	-0.1	0.0	1.1	2.6	0.6	0.6	1.0	1.7	0.2	0.3
JHU11648.P122C10	0.5	1.0	0.2	0.3	1.4	0.6	-0.2	-0.1	2.2	-0.1	-0.1	-0.2	0.2	0.3	0.0	9.1	6.5	0.2	0.3	0.4	0.3	0.3	0.2
Siglec	-0.1	-0.1	0.0	0.0	-0.1	0.4	0.7	1.6	2.1	1.9	7.6	0.9	0.5	-0.1	0.5	0.2	0.0	-0.1	-0.1	-0.1	0.0	0.1	0.1
JHU03973.P177F10	0.7	0.1	0.8	0.3	0.9	1.3	0.1	-0.1	-0.1	-0.1	-0.2	-0.1	1.2	4.5	0.5	0.3	3.0	1.0	1.2	1.0	0.5	0.1	0.2
JHU04098.P043G05	0.3	0.0	0.1	-0.1	0.5	0.0	3.5	2.5	3.4	2.2	0.6	0.9	0.0	0.0	0.0	0.0	0.1	-0.1	0.7	1.7	-0.1	0.0	0.0
JHU04733.P050B12	-0.2	-0.1	-0.2	-0.3	-0.3	2.1	0.3	1.1	0.5	0.3	0.1	4.5	-0.2	-0.2	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
JHU04823.P051B11	0.6	0.3	0.4	0.3	1.5	1.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	0.4	-0.1	0.0	0.1	0.5	0.3	0.8	1.5	0.1	0.1	2.9
JHU07315.P080D05	0.4	0.4	0.4	1.1	0.4	0.6	0.7	3.0	1.5	1.7	2.8	5.8	0.3	0.0	0.3	0.7	1.0	0.3	0.4	1.3	0.3	0.5	0.5
LILRB2	-0.1	-0.1	-0.1	0.0	-0.1	-0.1	0.7	0.4	1.0	2.7	4.7	10.4	-0.1		0.0	-0.1	0.0	-0.2	-0.1	-0.1	-0.2	-0.1	-0.1
JHU07580.P178F11	0.2	0.1	0.6	0.4	0.5	0.4	-0.1	0.0	0.7	0.0	0.1	-0.1	0.6	0.7	7.7	3.9	1.2	1.0	0.9	0.0	0.5	0.3	0.4
CD47	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	0.1	0.1	5.4	0.3	1.8	0.0	-0.2	-0.2	-0.2	-0.2	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1

Shared antigens grouped by cancer type



- IgG from Elite Responders recognized targets involved in immunosuppression
- OncoResponse is building a “Seromic” database for discovery of novel targets, epitopes, and potential biomarkers

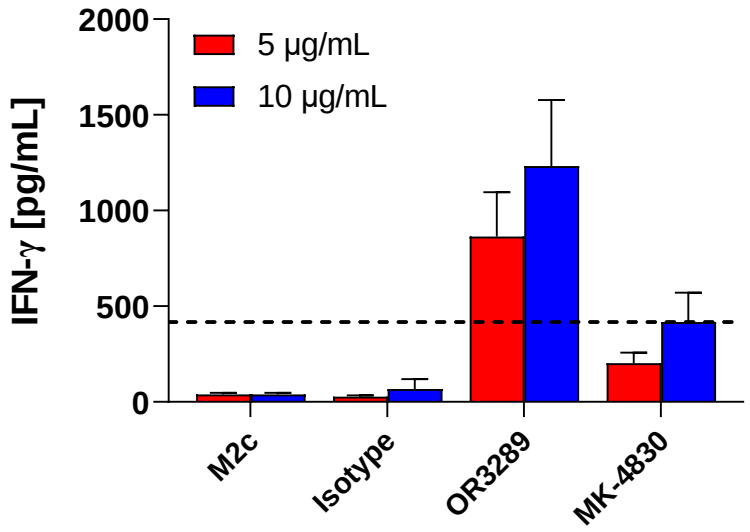
LILRB2 antagonism reprograms TAMs and promotes anti-tumor immunity



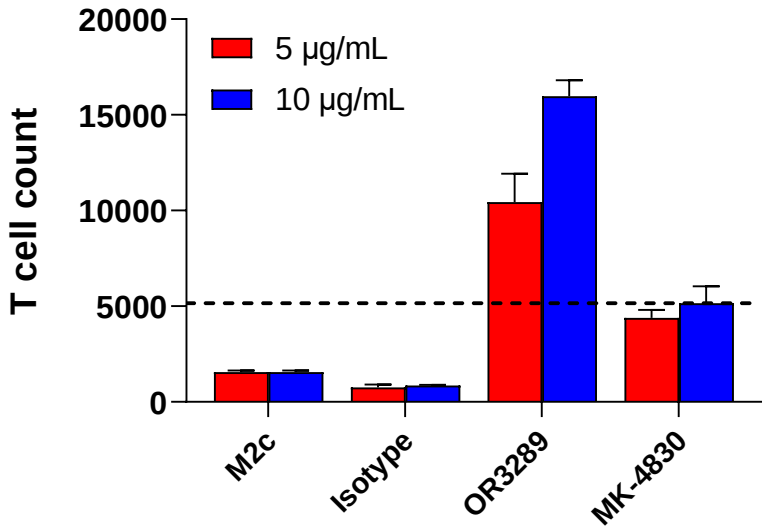
OncoResponse antibody enhances CD8+ T cell proliferation and IFNγ production in M2c/T cell coculture assay

M2c/CD8+ T cell coculture

IFNγ production

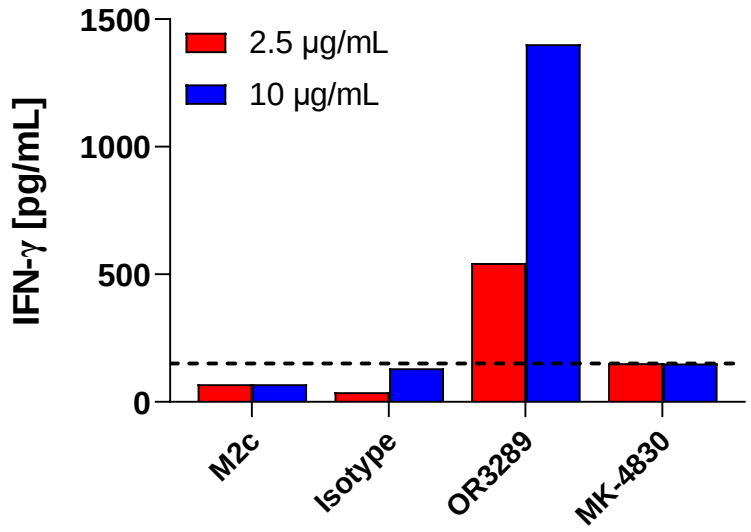


CD8+ T cell proliferation



M2c/Exhausted T cell coculture

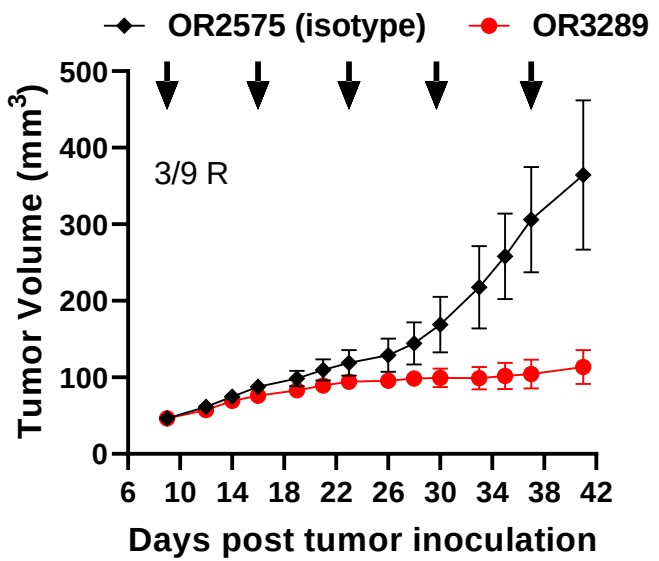
IFNγ production



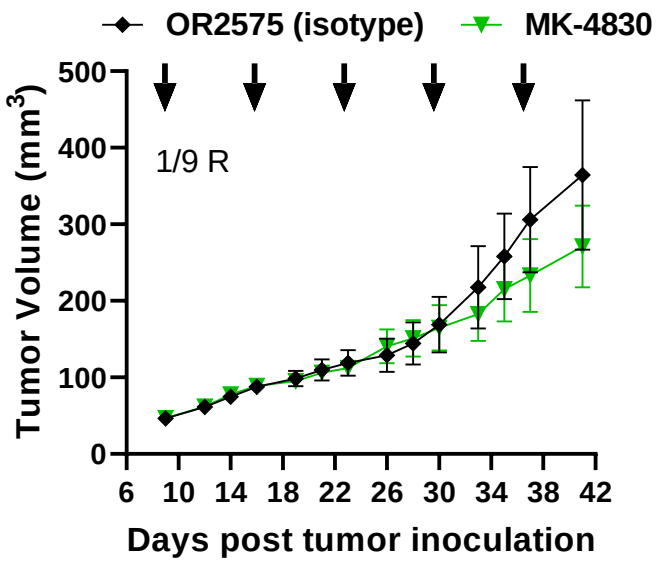
OncoResponse antibody OR3289 outperforms MK-4830 in M2/T cell coculture assay

OncoResponse antibody induces anti-tumor response in SK-MEL-5 tumor model in humanized NSG-SGM3 mice

OR3289 (OncoResponse)



MK-4830 (Merck)

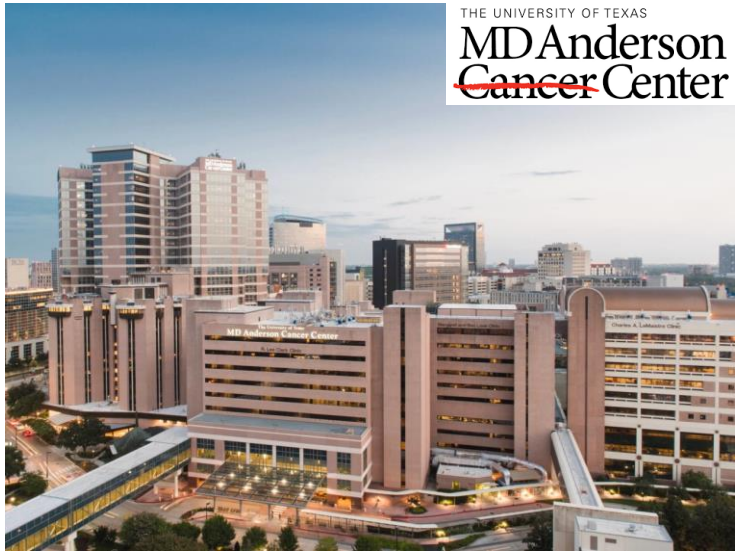


- Dosing: 20 mg/kg i.p.
- Dosing Days: 9, 16, 23, 30, 37

All groups N=9

	Tumor Growth Inhibition (%)						Regression (%)
Group	***d28***	***d30***	***d33***	***d35***	***d37***	***d41***	***d41***
OR3289 (OncoResponse)	47	57	69	74	78	79	33
MK-4830 (Merck)	-5	3	16	17	24	26	11

Acknowledgements



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Patients who provided precious tissue samples for this study

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