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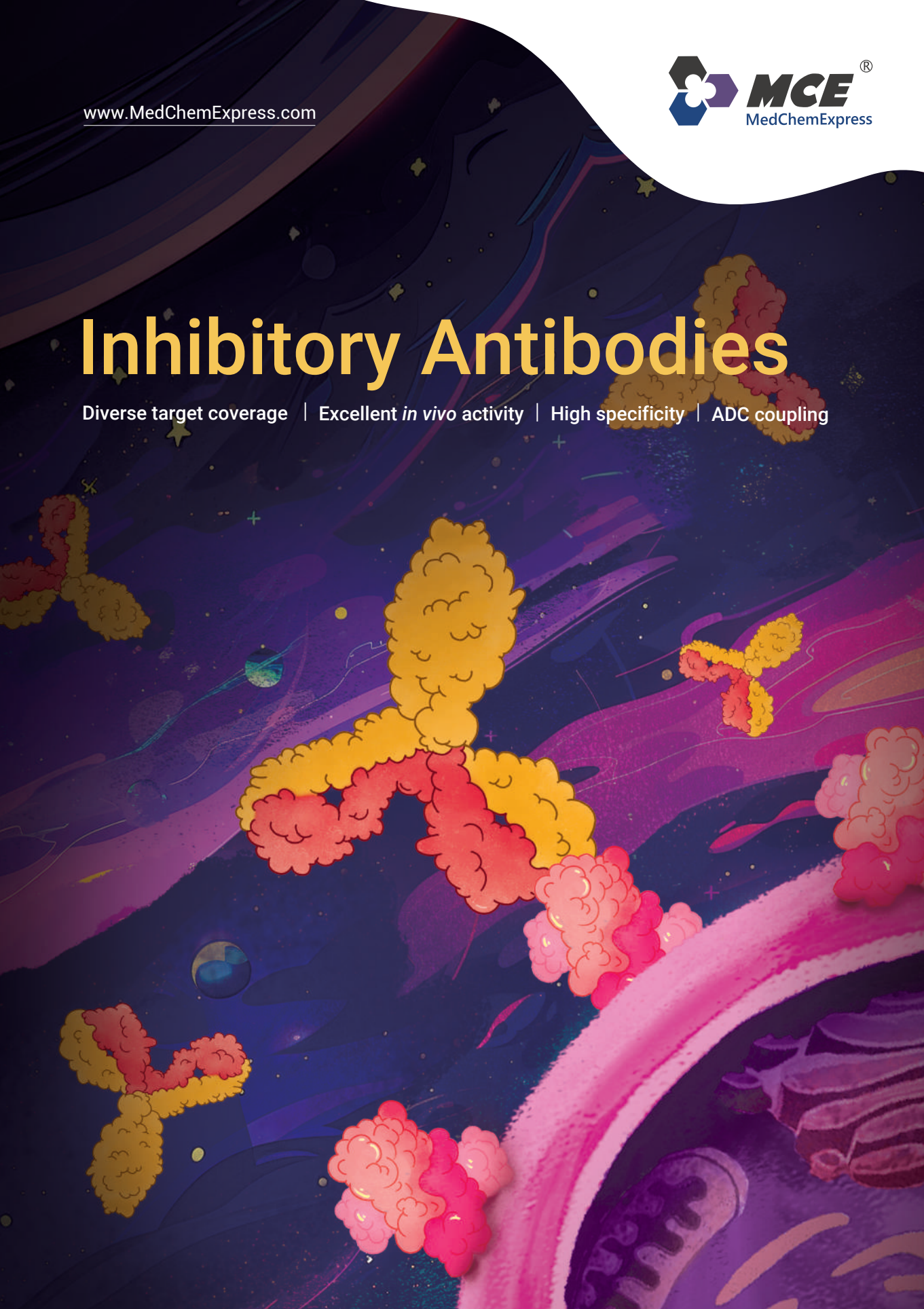
MCE®
MedChemExpress

Inhibitory Antibodies

Diverse target coverage | Excellent *in vivo* activity | High specificity | ADC coupling



MedChemExpress

MedChemExpress (MCE) stands as a leading global brand in the field of life sciences, offering a wide range of **high-purity small molecules**, **highly potent large molecules**, and a diverse selection of widely used **biological reagents** and **assay kits**. Furthermore, MCE extends its reach to scientists worldwide by providing **professional technical services**, including one-stop drug screening and compound customization.

With a robust R&D team and a stringent quality control system, MCE is committed to delivering 24/7 professional and attentive service to its customers. MCE's unwavering dedication to serving scientific research with stable, high-quality products and pioneering solutions underscores MCE's commitment to advancing human scientific research and pharmaceutical development.

100,000+ High Purity Small Molecules

- Specific Inhibitors & Agonists
- Natural Products
- Isotope-Labeled Compounds
- Fluorescent Dyes/ Probes
- GMP Small Molecules
- Reference Standards
- PROTACs & Molecular Glues
- Click Chemistry
- Biochemical Assay Reagents
- Personalized Customization

65,000+ High Activity Biological Large Molecules

- Recombinant Proteins
- Peptides
- Primary & Secondary Antibodies
- Inhibitory Antibodies
- Oligonucleotides
- Enzymes
- Antibody-drug Conjugates/ ADC Related
- Personalized Customization

MCE One-Stop Drug Screening Platform

Compound Libraries

- Ready-to-Use Compound Libraries
- Diversity Compound Libraries
- Fragment Libraries, etc.
- Customized Libraries

Screening Services

- Virtual Screening
- DEL Screening
- SPR Assay Service, etc.

Lead Compound Optimization

High Efficiency Biological Kits

- Inhibitor Cocktails
- RT/qPCR & PCR Master Mix
- Magnetic Beads & Agarose
- Protein Biology
- 2D/3D Cell Culture
- Cell Analysis

Inhibitory Antibodies

MCE inhibitory antibodies are functional *in vivo* antibodies that mainly function by binding to target molecules and blocking their function or signal transduction. The mechanisms of action include competitive binding, inhibition of ligand binding, and blocking signaling pathways. Our products range from research-grade biosimilar therapeutic antibodies, neutralizing/blocking antibodies, and animal in vivo antibodies, which are widely used in popular research areas such as cancer, immunology, and infection.

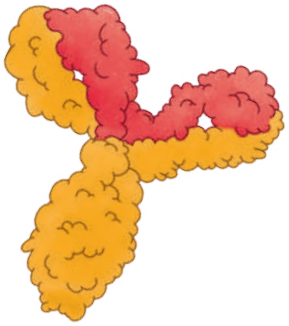
MCE offers over 2,000 inhibitory antibodies manufactured under stringent quality control processes. These include monoclonal antibodies, bispecific antibodies, fusion proteins, rat/mouse in vivo antibodies, isotype control antibodies, etc. These products are characterized by high purity, low endotoxin levels, and high activity, meeting various experimental requirements at cellular, molecular, and animal levels to support your research endeavors!

Related Vocabulary

- Biosimilar antibodies
- Reference antibodies
- Neutralizing antibodies
- Blocking antibodies
- *In vivo* antibodies
- Animal antibodies
- Functional antibodies

Application Areas

- Stimulation, neutralization, blocking, and other functional experiments
- Animal models to study immune responses and disease mechanisms
- As a positive control for drug evaluation and other related scientific studies
- To assist in verifying the functional activity of target proteins
- For ADC conjugation studies



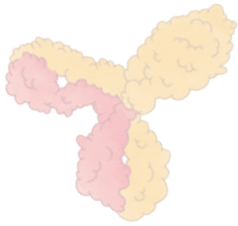
Product Advantages

Broad target coverage

Precise antigen recognition

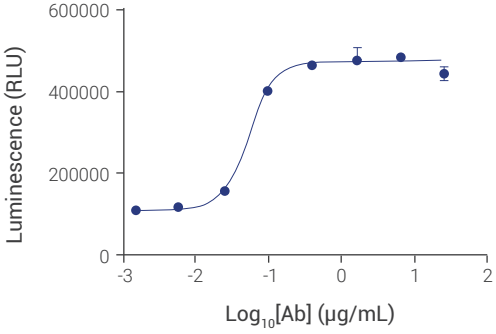
Strong blocking activity

Exclusive activity validation

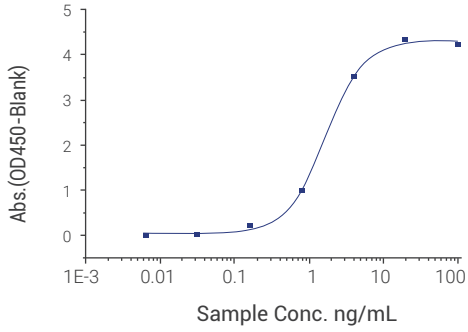


High Biological Activity

- **Atezolizumab** (HY-P9904) exhibits good bioactivity, with an EC_{50} value of 0.05492 μg/mL.

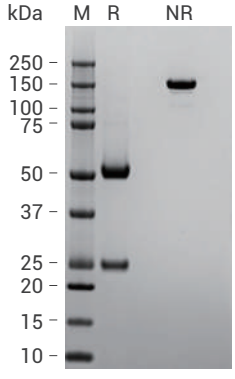


- **Flanvotumab** (HY-P99622) exhibits good bioactivity, with an EC_{50} value of 1.67392 ng/mL.

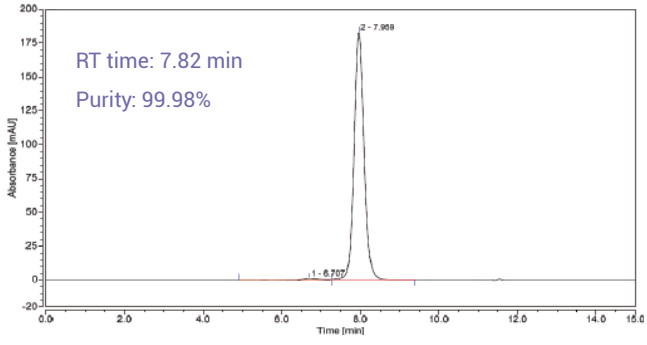


High purity (Validation by both SDS-PAGE and SEC-HPLC)

- **Amivantamab** (HY-P9977)



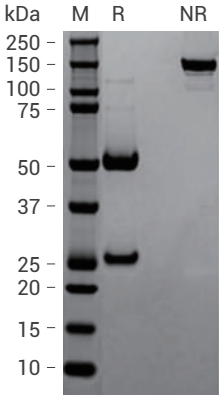
- >95% as analyzed by SDS-PAGE under reducing (R) and non-reducing (N) condition.

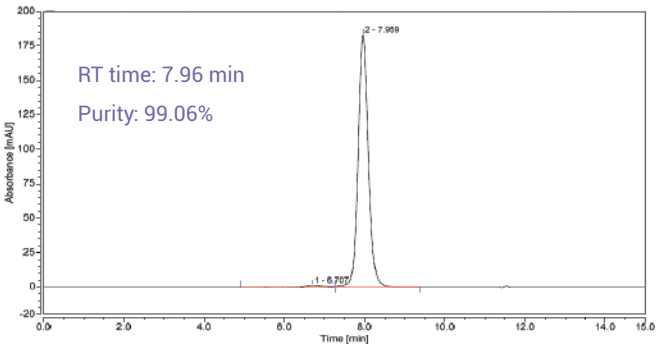


SEC-HPLC

- Amivantamab is free of polymers and has a purity of up to 99.98%.
  99.98% as analyzed by SEC-HPLC.

- **Obiltoxaximab** (HY-P9932)



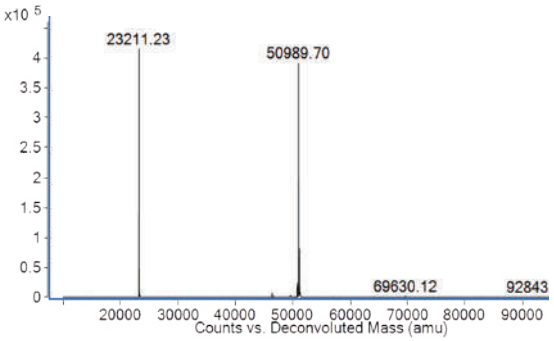


SEC-HPLC

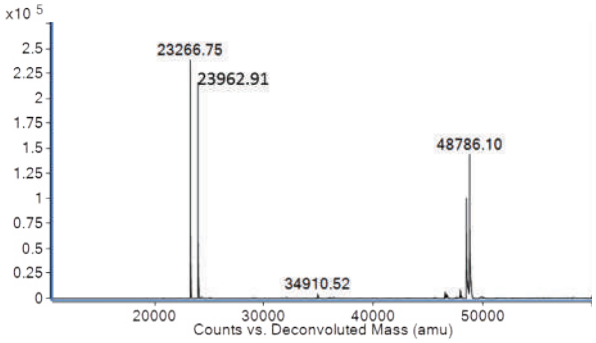
- ＞95% as analyzed by SDS-PAGE under reducing (R) and non-reducing (N) condition.
- Obiltoxaximab is free of polymers and has a purity of up to 99.06%.
  99.06% as analyzed by SEC-HPLC.

Strict Quality Control: Mass Spectrometry Gatekeeper

- **Oleclumab** (HY-P99039)



- **Fazpilodemab** (HY-P99614)



Reduced molecular weights of heavy and light chains of Oleclumab (HY-P99039) and Fazpilodemab (HY-P99614) determined by mass spectrometry

Popular Product Recommendations

Category	Cat. No.	Product Name	Target	Isotype	Reactivity
Monoclonal Antibodies	HY-P9905	Cetuximab	EGFR	IgG1-κ	Human
	HY-P99355	Bimagrumab	ActRII	IgG1-λ2	Human
	HY-P9926	Dupilumab	IL-4Rα	IgG4-κ	Human
	HY-P9903	Nivolumab	PD-1	IgG4-κ	Human
	HY-P9915	Daratumumab	CD38	IgG1-κ	Human
	HY-P9907	Trastuzumab	HER2	IgG1-κ	Human
	HY-P9906	Bevacizumab	VEGF-A	IgG1-κ	Human
	HY-P9917	Tocilizumab	IL-6R	IgG1-κ	Human
	HY-P9904	Atezolizumab	PD-L1	IgG1-κ	Human
	HY-P9910	Obinutuzumab	CD20	IgG1-κ	Human
	HY-P99144	Anti-Mouse PD-1 Antibody (RMP1-14)	PD-1	IgG2b-κ	Mouse
	HY-P99145	Anti-Mouse PD-L1 Antibody (10F.9G2)	PD-L1	IgG2b-κ	Mouse
	HY-P99126	Anti-Mouse CD44 Antibody (IM7)	CD44	IgG4-λ	Mouse
	HY-P99132	Anti-Mouse CTLA-4 Antibody	CTLA-4	IgG2b-κ	Mouse
	HY-P99148	Anti-Mouse TNF alpha Antibody	TNF alpha	Armenian Hamster IgG-κ	Mouse
	HY-P9908	Adalimumab	TNF-α	IgG1-κ	Human
	HY-P99055	Urelumab	CD137	IgG4-κ	Human
	HY-P9967	Aducanumab	Aβ	IgG1-κ	Human
	HY-P9901	Ipilimumab	CTLA-4	IgG1-κ	Human
	HY-P99057	Varlilumab	CD27	IgG1-κ	Human

Category	Cat. No.	Product Name	Target	Isotype	Reactivity
Monoclonal Antibodies	HY-P99168	Anifrolumab	IFN	IgG1-κ	Human
	HY-P9919	Durvalumab	PD-L1	IgG1-κ	Human
	HY-P99157	Anti-Mouse CD276 Antibody	CD276	IgG1-κ	Human
	HY-P99326	Anti-Mouse CD20 Antibody	CD20	IgG2a-λ	Human
	HY-P99254	Anti-Mouse NGcGM3 Antibody	NGcGM3	IgG1-κ	Human
	HY-P99276	Anti-Mouse CA-125 Antibody	CA-125	IgG1-κ	Human
	HY-P99287	Anti-Mouse IL-6 Antibody	IL-6	IgG1-nd	Human
	HY-P99464	Anti-Mouse CD22 Antibody	CD22	Fab-G2a-κ	Human
	HY-P99206	Naxitamab	GD2	IgG1-κ	Human
	HY-P99625	Frexalimab	CD40L	IgG1-κ	Human
	HY-P99488	Briquilimab	CD117	IgG1-κ	Human
	HY-P99225	Mirvetuximab	FOLR1	IgG1-κ	Human
	HY-P99229	Upifitamab	NaPi2b	IgG1-κ	Human
	HY-P99711	Loncastuximab	CD19	IgG1-κ	Human
Bispecific Antibodies	HY-P9963	Blinatumomab	CD19/CD3E	/	Human
	HY-P99573	Tebotelimab	PD-1/LAG-3	/	Human
	HY-P9977	Amivantamab	EGFR/MET	IgG1-κ	Human
	HY-P99385	Vobarilizumab	IL6R/ALB	VH-VH'	Human
	HY-P99575	Tarlatamab	DLL3/CD3E	/	Human
	HY-P99931	Epcoritamab	CD3/CD20	Ig(G1-κ G1-22)	Human
	HY-P99392	Teclistamab	BCMA/CD3	IgG4-λ	Human
	HY-P99024	Glofitamab	CD3E/MS4A1	IgG1-κ	Human
	HY-P99394	Talquetamab	GPRC5D/CD3	Ig(G4-κ_G4-X2pn	Human

Category	Cat. No.	Product Name	Target	Isotype	Reactivity
Bispecific Antibodies	HY-P9999	Trontinemab	APP/TFRC	IgG1-κ	Human
	HY-P99507	Zenocutuzumab	HER2/HER3	IgG1-κ	Human
	HY-P99852	Dilpacimab	DLL4/VEGF	/	Human
	HY-P99762	Obrindatamab	B7-H3/CD3	/	Human
Fusion Proteins	HY-108841	Raleukin	IL-1R	/	Human
	HY-P99974	Nab-Paclitaxel	/	/	Human
	HY-P99518	Taldefgrobep alfa	myostatin	/	Human
	HY-108829	Abatacept	CTLA4	/	Human
	HY-P99459	Baminercept	LTβR	/	Human
	HY-P990054	Eramkafusp Alfa	MS4A1	IgG1-κ	Human
	HY-P99696	Lerodalcibep	PCSK9	/	Human
	HY-P99841	Dalutrafusp alfa	CD73	IgG1-κ	Human
	HY-P99797	Pabinafusp alfa	Transferrin Receptor	IgG1-κ	Human
	HY-P99605	Cinrebafusp alfa	CD137/HER2	IgG4-κ	Human
	HY-P99530	Valanafusp alfa	HIR/IDUA	IgG1-κ	Human
Isotype Control Antibodies	HY-P99977	Mouse IgG1 κ, Isotype Control	/	IgG1-κ	Mouse
	HY-P99986	Mouse IgG2a (D265A) κ, Isotype Control	/	IgG2a-κ	Mouse
	HY-P99001	Human IgG1 κ, Isotype Control	/	IgG1-κ	Human
	HY-P99003	Human IgG4 κ, Isotype Control	/	IgG4-κ	Human
	HY-P99985	Mouse IgG3 κ, Isotype Control	/	IgG3-κ	Human
	HY-P99984	Mouse IgG1 (N297A) κ, Isotype Control	/	IgG1-κ	Human
	HY-P99981	Mouse IgG2c κ, Isotype Control	/	IgG2c-κ	Human
	HY-P99982	Mouse IgG2b κ, Isotype Control	/	IgG2b-κ	Human

Customer Validation

Anifrolumab (HY-P99168)

- **Culture system:** Co-culture system of ventricular cardiac organoids with THP-1 cells.
- **Dosage:** 1 and 10 μg/mL
- **Result:** Anifrolumab treatment efficiently reversed H/R-induced increasing secretion of IFNα in the culture medium.

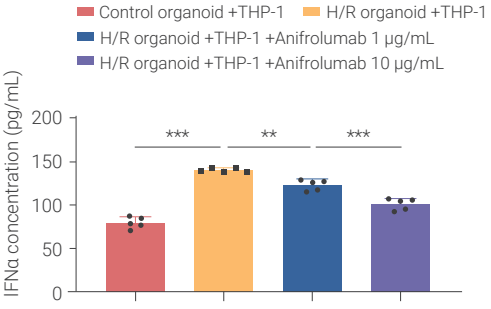


Figure 1. Secretion of IFNα in the culture medium of organoid co-culturing with THP-1. **Cell Prolif.** 2024 Oct 8:e13762.

Nivolumab (HY-P9903)

- **Cell Line:** Co-culture system with NSCLC cell lines and patient-derived intratumor NKs or NK92 cells
- **Dosage:** 15 μg/mL.
- **Incubation Time:** 72 hours
- **Result:** Bromodomain and Extra-Terminal Protein Inhibitor (BETi) Induces Downregulation of Multiple Immune Checkpoints in NK

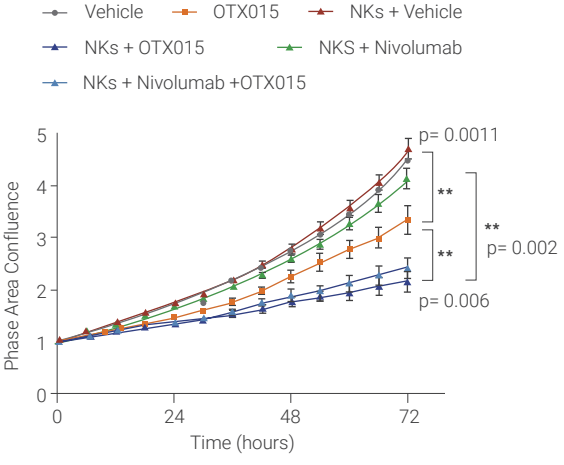


Figure 2. Representative proliferation assay of co-cultures using patient-derived intratumor NKs and NCI-H23 cells with Nivolumab. **Nat Commun.** 2024 Mar 22;15(1):2567

Using Tips

1. Transportation of Inhibitory Antibodies

MCE inhibitory antibodies are shipped with blue ice or dry ice. Check official website for detailed shipping conditions.

2. Storage of Inhibitory Antibodies

Follow storage conditions and precautions on Certificate of Analysis (COA). Proper storage could maintain stability for up to 2 years.

3. Pre-handling before Opening

During product transportation, powder or solution might adhere to the tube wall or cap. Before opening, centrifuge (approximately 13,000 rpm) for 20-30 seconds to collect the antibody at the bottom of the tube. MCE guarantees that the total amount of antibody in each tube meets the indicated content.

4. Inhibitory Antibodies Reconstitution

- Use sterile PBS or 0.9% saline solution.
- Use within 1 month of reconstitution.
- Avoid rapid vortexing; gently mix with pipette tip/syringe.
- Use cold buffer and operate in biosafety cabinet.
- Maintain sterility with sterile equipment.
- Avoid long-term storage at working concentrations.

5. Inhibitory antibodies Concentration Calculation

The concentration of MCE antibody inhibitor products is calculated using A280/extinction coefficient. Proteins absorb UV light, and show maximum light absorption peaks near at 280 nm.
Since most proteins/antibodies contain tyrosine and tryptophan residues, measuring the absorbance of proteins/antibodies at 280 nm is one of the more quick and simple methods to analyze the protein/antibody content in a solution.

6. What is the isotype control antibody? How to choose?

- Matches detection antibody in species origin, subtype, and dose.
- Eliminates background from nonspecific binding (nonspecific Fc receptor or other proteins interactions).
- Serves as negative control for primary antibody specificity.
- Example: For human IgG1 Adalimumab (HY-P9908), use Human IgG1 kappa isotype control (HY-P99001).

Publications Citing Use of MCE Inhibitory Antibodies

Publications	Cat. No.	Name
Nat Commun. 2024 Aug 26;15(1):7165.	HY-P99168	Anifrolumab
Cell Signal. 2024 Aug 13:111346.	HY-P9906	Bevacizumab
Neuropharmacology. 2024 Aug 11:110115.	HY-P99124	Anti-Mouse CD3 Antibody (17A2)
Adv Sci (Weinh). 2024 Aug 8:e2406633.	HY-P9903	Nivolumab
Nat Commun. 2024 Aug 7;15(1):6726.	HY-P99003	Human IgG4 (S228P) kappa, Isotype Control
J Immunother Cancer. 2024 Aug 6;12(8):e009024.	HY-P9902	Pembrolizumab
Cell Mol Life Sci. 2024 May 81(1):240.	HY-P9908	Adalimumab
Cancer Lett. 2024 May 1;589:216836.	HY-P99145	Anti-Mouse PD-L1/B7-H1 Antibody (10F.9G2)
Cell Mol Life Sci. 2024 May 28;81(1):240.	HY-P9917	Tocilizumab
Drug Resist Updat. 2024 Mar 13:74:101078.	HY-P99631	Garadacimab
Transl Oncol. 2024 Mar 14:44:101928.	HY-P9907	Trastuzumab
Cell. 2023 Dec 7;186(25):5606-5619.e24.	HY-P9905	Cetuximab
Biomaterials. 2024 Mar 28:308:122550.	HY-P9904	Atezolizumab
Nat Commun. 2024 Mar 22;15(1):2567.	HY-P9901	Ipilimumab
Immunity. 2024 Feb 13;57(2):256-270.e10.	HY-P9902	Pembrolizumab
Eur J Pharmacol. 2023 Dec 5;960:176128.	HY-P99144	Anti-Mouse PD-1 Antibody (RMP1-14)
Front Immunol. 2023 Nov 23:14:1282710.	HY-P9903	Nivolumab
Theranostics. 2024 Jan 20;14(3):1312-1324.	HY-P9906	Bevacizumab
Clin Cancer Res. 2024;30(8):1530-1543.	HY-P99275	Patritumab
Nat Commun. 2024 Mar 22;15(1):2567.	HY-P9903	Nivolumab
Sci Rep. 2024 Feb 14;14(1):3771.	HY-P9912	Pertuzumab
Nat Commun. 2024 Jan 25;15(1):752.	HY-P99208	Lirilumab
Cancer Lett. 2024 Jan 24:216642.	HY-P9970	Infliximab
BMC Oral Health. 2024 Jan 18;24(1):107.	HY-P9908	Adalimumab
Mol Metab. 2024 Jan 11:101880.	HY-P99355	Bimagrumab
Cell Commun Signal. 2024 Jan 10;22(1):27.	HY-P99058	Zolbetuximab
Biochem Pharmacol. 2023 Dec 26:115996.	HY-P9930	Evolocumab
Biomaterials. 2024 Jul 31:312:122740.	HY-P99731	Milatuzumab

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