

Antibodies

High Sensitivity | Strong Specificity | High Affinity | High Batch-to-Batch Consistency

Monoclonal Antibody

Polyclonal Antibody

Recombinant Antibody

Small Molecule Antibody

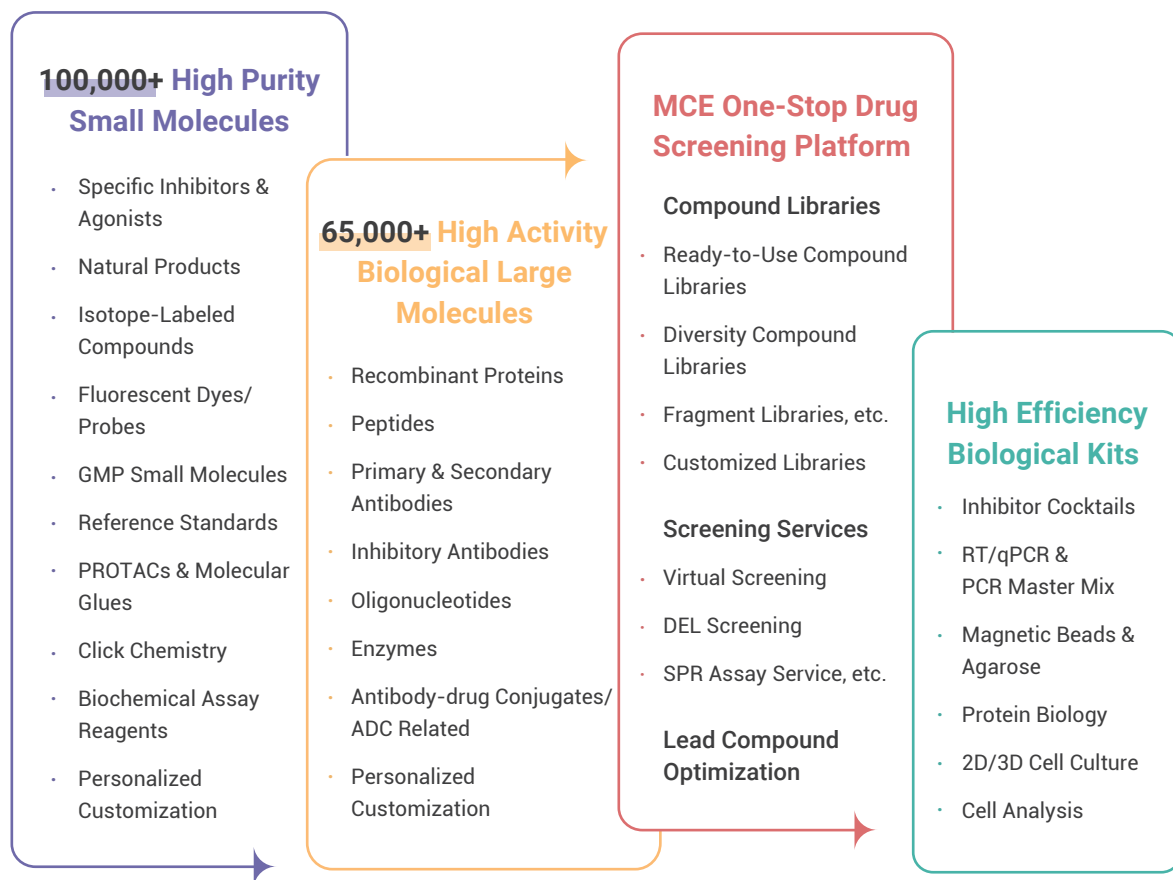
Loading control Antibody

Tag Antibody

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.





Strict Quality System

- Equipped with a professional experimental center and strict quality control system
- Provide various quality inspection reports such as HNMR, LC/MS, HPLC, chiral analysis, elemental analysis, SDS-PAGE, SEC-HPLC, activity detection, etc.



Bioactive Validation

- The biological activity and experimental results of MCE products have been validated by customers worldwide, and the research findings have been widely published in top-tier journals globally.



Professional & Considerate Service

- Experienced technical support team
- 24/7 Response
- Sufficient spot reserves

Top Publications Citing Use of MCE Products

Nature. 2025 Apr;640(8057):249-257.

Nature. 2025 Mar;639(8055):765-775.

Nature. 2025 Mar;639(8054):438-446.

Nature. 2025 Mar;639(8055):808-815.

Nature. 2025 Feb;638(8052):1095-1103.

Nature. 2025 Feb;638(8049):225-236.

Nature. 2025 Feb;638(8052):1112-1121.

Cell. 2025 Apr 3;188(7):1828-1841.e15.

Cell. 2025 Mar 6;188(5):1330-1348.e27.

Cell. 2025 Mar 20;188(6):1623-1641.e26.

Cell. 2025 Mar 6;188(5):1248-1264.e23.

Cell. 2025 Feb 6;188(3):814-831.e21.

Cell. 2025 Feb 6;188(3):653-670.e24.

Cell. 2025 Feb 20;188(4):998-1018.e26.

Science. 2025 Jan 10;387(6730):eads9960.

Science. 2024 Dec 13;386(6727):eado5561.

Science. 2024 Nov 15;386(6723):eadh9215.

Science. 2024 Sep 13;385(6714):eadj1979.

Science. 2024 Aug 30;385(6712):eado6593.

Science. 2024 Jun 21;384(6702):eade8520.

Science. 2024 Jul 19;385(6706):eadn5529.

Science. 2024 Jun 21;384(6702):eade8520.



Antibodies, also known as Immunoglobulins (Ig), are produced and secreted by plasma cells, which originate from the proliferation and differentiation of B cells. They exhibit remarkable specificity in recognizing and binding to antigens.

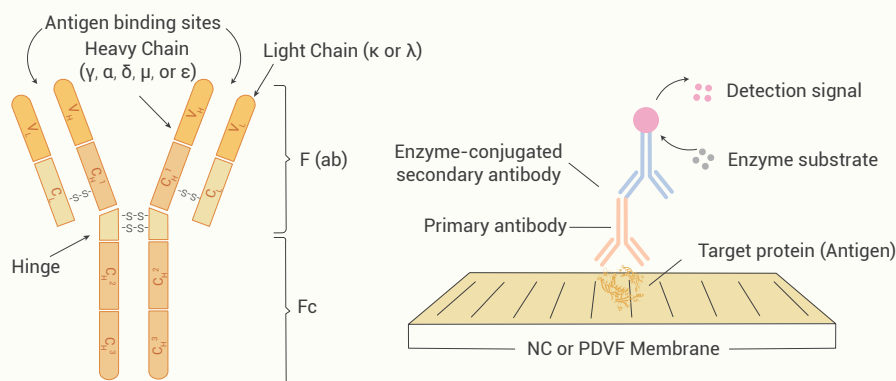


Figure 1. Antibody Structure (left) and Detection Principle (right): Antibodies can be classified into five classes based on the Fc region of their heavy chains: α -IgA, δ -IgD, ϵ -IgE, γ -IgG, and μ -IgM. The light chains are of two types: λ and κ (left). Primary antibodies specifically recognize and bind to antigens. Secondary antibodies recognize and bind to the primary antibodies, amplifying the signal and aiding in the detection of the antigen (right).

MedChemExpress (MCE) Product Highlights

MedChemExpress (MCE) offers **6,000+** premium **primary antibodies** and diverse high-quality secondary antibodies, covering key signaling pathways like autophagy, apoptosis, immunity, and cell cycle pathways, addressing popular targets to advance your research comprehensively.

High specificity and affinity: Recombinant rabbit monoclonal antibodies minimize nonspecific binding.

Wide applicability: Versatile for WB, IF/ICC, IHC, FC, ELISA, etc.

Rigorous quality control: Each antibody batch undergoes rigorous testing to ensure consistent, reliable performance.



Cell Cycle/DNA Damage

Casein Kinase 2, eIF1A, eIF4B, HDAC6, ATF6, Cdk2, Cdk4, Cdk6, Cyclin B1



Metabolic Enzymes/Proteases

HIF1, Retinoid X Receptor alpha, Ubiquitin, Cathepsin B Antibody, LXR alpha Antibody



Apoptosis

Bcl2, Cleaved-Caspase 3 p12, p53, FKBP51, FKBP52, Bak, Bax, Bcl-XL



Small Molecule Antibody

DXd, MMAE, MMAF, 3-Nitrotyrosine, DM1, DM4



Small Molecule Antibody

xCT, DHCR7, Transferrin Receptor 1, Ferritin Heavy Chain



Autophagy

ATG10, ATG3, ATG4A, Beclin 1, LAMP2, ULK1, FOXO3a, ATG5

Top Selling Products

Primary Antibodies: Antibodies that specifically bind to target antigens with high specificity and affinity, widely used for protein detection, purification, and quantification.

Autophagy			Apoptosis		
Product Name	Application	Reactivity	Product Name	Application	Reactivity
HY-P80555 ATG10 Rabbit mAb	WB, IP	Human	HY-P80566 Bcl2 Rabbit mAb	WB, IHC-P	Human, Mouse
HY-P80556 ATG3 Rabbit mAb	WB, IHC-F, IH HC-P, ICC/IF	Human Mouse, Rat	HY-P80623 Cleaved-Caspase 3 p12 Rabbit mAb	WB, ICC/IF	Human, Mouse, Rat
HY-P80557 ATG4A Rabbit mAb	WB, IHC-P, IP	Human	HY-P80257 p53 Rabbit mAb	WB, ICC/IF, IHC-P, IP	Human
HY-P80132 FOXO1A Rabbit mAb	WB, ICC/IF, IHC-P	Human, Mouse	HY-P80050 Caspase-9 Rabbit mAb	WB, ICC/IF, IHC-P, IP, FC	Human, Mouse

Cell Cycle/DNA Damage			Metabolic Enzyme/Protease		
Product Name	Application	Reactivity	Product Name	Application	Reactivity
HY-P80586 Casein Kinase 2 beta Rabbit mAb	WB, IHC-F, IH C-P, ICC/IF, IP	Human Mouse, Rat	HY-P80705 HIF1 beta Rabbit mAb	WB, IHC-P	Human, Mouse, Rat, Hamster
HY-P80649 eIF1A Rabbit mAb	WB, IHC-F, IH C-P, ICC/IF, IP	Human Mouse, Rat	HY-P80309 Retinoid X Receptor alpha Rabbit mAb	WB, ICC/IF, IHC-P, IP	Human, Rat
HY-P80200 JunB Rabbit mAb	WB, ICC/IF, IHC-P, IP	Human	HY-P80363 Ubiquitin Rabbit mAb	WB, ICC/IF, IHC-P, FC	Human, Mouse, Rat

Small Molecule Antibody					
Product Name	Application	Reactivity	Product Name	Application	Reactivity
HY-P81054 DXd Mouse mAb	ELISA	Species independent	HY-P81056 MMAE Rabbit mAb	ELISA	Species independent
HY-P81248 SN38 Rabbit mAb	WB, ELISA	Species independent	HY-P81057 MMAF Mouse mAb	ELISA	Species independent

Ferroptosis			Pyroptosis		
Product Name	Application	Reactivity	Product Name	Application	Reactivity
HY-P80692 Glutathione Peroxidase 4 Rabbit pAb	WB, IHC-F, IHC-P, ICC/IF	Human, Mouse, Rat	HY-P80918 Toll-Like Receptor 4 Rabbit pAb	WB, FC	Human
HY-P80410 ATG3 Rabbit mAb	WB, ICC/IF, IHC-P, IP	Human, Mouse, Rat	HY-P80413 IKK alpha Rabbit mAb	WB, ICC/IF, IHC-P, FC, IP	Human, Mouse
HY-P81000 ATG4A Rabbit mAb	WB, IHC-P, IP, FC	Human, Mouse, Rat	HY-P80246 NLRP3 Rabbit mAb	WB, ICC/IF, IHC-P, FC, IP	Human, Mouse, Rat
HY-P80670 FOXO1A Rabbit mAb	WB, ICC/IF	Human, Mouse, Rat, Hamster	HY-P80765 NF-KB p65 Rabbit mAb	WB, IHC-F, IHC-P, ICC/IF, IP	Human, Mouse
HY-P80523 xCT Mouse mAb	WB, IHC-P, ICC, FC	Human, Mouse	HY-P80720 IL-1 beta Rabbit pAb	WB, IHC-P, ICC/IF	Human, Mouse, Rat

Loading Control Antibody / Tag Antibodies: Helping you to detect and identify proteins more accurately, enhancing the reliability and consistency of your experiments.

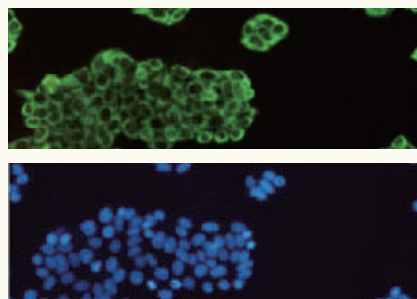
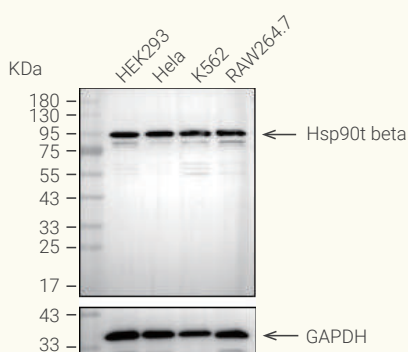
Type	Product Name	Application	Product Name	Application
Loading Control Antibody	HY-P80438 Beta Actin Antibody	WB, ICC/IF, IHC-P, FC	HY-P80487 beta Tubulin Antibody	WB, ICC/IF, IHC-P, FC
	HY-P80993 Beta Actin Antibody (HRP)	WB	HY-P80955A beta Tubulin Antibody (HRP)	WB
	HY-P80954 GAPDH Antibody	WB	HY-P80166 Histone H3 Antibody	WB, ICC/IF, IHC-P, ChIP
	HY-P80954A GAPDH Antibody (HRP)	WB, ELISA	HY-P80537 ATP1A1 Antibody	WB, IHC-P, ICC/IF, FC
Tag Antibody	HY-P83697 6X His-tag Antibody	WB, IP	HY-P80948 HA-tag Antibody	WB, IP
	HY-P80232 Myc-tag Antibody	WB, ELISA, IP	HY-P80141 GFP Antibody	WB, ICC/IF, IHC-P, IP
	HY-P80111 DYKDDDDK-tag (FLAG) Antibody	WB, ICC/IF, IP	HY-P81039 Strep-tag II Antibody	WB, ICC/IF, IP
	HY-P80148A GST-tag Antibody	WB, ICC/IF, IP	HY-P80367 V5-tag Antibody	WB, ELISA

Secondary Antibodies: These bind to primary antibodies to amplify signals and enhance detection flexibility. They transmit signals to detection systems, allowing for more versatile labeling and detection.

Conjugation	Product Name	Conjugation	Product Name
HRP	HY-P8001/ HY-P8004 Goat Anti-Rabbit/ Mouse IgG H&L (HRP-Conjugated)	Cy7	HY-P81021/ HY-P81020 Goat Anti-Rabbit/ Mouse IgG H&L (Cy7-Conjugated)
Biotin	HY-P80953/ HY-P80949 Goat Anti-Rabbit/ Mouse IgG H&L (Biotin-Conjugated)	Alexa Fluor® 488	HY-P8002/ HY-P8005 Goat Anti-Rabbit/ Mouse IgG H&L (Alexa Fluor® 488-Conjugated)
TRITC	HY-P81007/ HY-P81008 Goat Anti-Rabbit/ Mouse IgG H&L (TRITC-Conjugated)	Alexa Fluor® 405	HY-P81015/ HY-P81014 Goat Anti-Rabbit/ Mouse IgG H&L (Alexa Fluor® 405-Conjugated)
FITC	HY-P80951/ HY-P80950 Goat Anti-Rabbit/ Mouse IgG H&L (FITC-Conjugated)	Alexa Fluor® 594	HY-P8003/ HY-P8006 Goat Anti-Rabbit/ Mouse t IgG H&L (Alexa Fluor® 594-Conjugated)
Cy3	HY-P81017/ HY-P81016 Goat Anti-Rabbit/ Mouse IgG H&L (Cy3-Conjugated)	Alexa Fluor® 647	HY-P80952/ HY-P81013 Goat Anti-Rabbit/ Mouse IgG H&L (Alexa Fluor® 647-Conjugated)

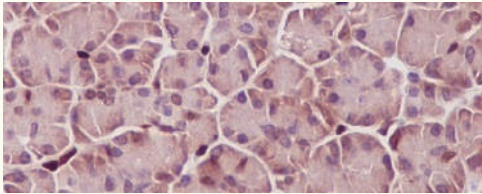
Experiment Validation

Endogenous Immunological Verification:



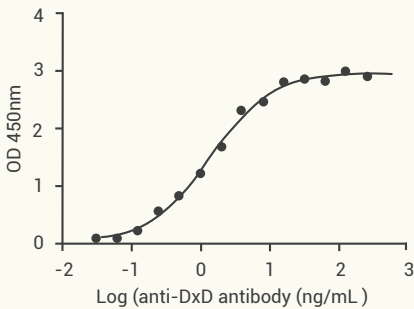
- Primary Antibody: Hsp90 beta Antibody (HY-P80187)
- Secondary Antibody: HRP-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L) (HY-P8001)
- Loading Control Antibody: GAPDH Antibody (HRP) (HY-P80954A)

- Immunofluorescence analysis of Hsp90 alpha in Hela cells.
- Primary Antibody: Hsp90 alpha/beta Antibody (HY-P80714)
- Secondary Antibody: FITC-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L) (HY-P80951)



- Immunohistochemical analysis of Phospho-STAT3 on paraffin-embedded human pancreas tissue.
- Primary Antibody: Phospho-STAT3 Antibody (HY-P80857)
- Secondary Antibody: HRP-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L) (HY-P8001)

ELISA Validation:

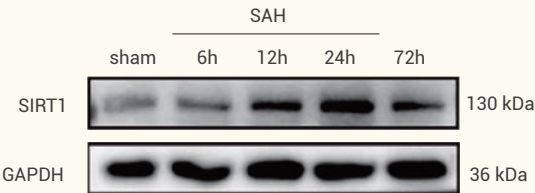


The Binding Activity of T-DXd(DS-8201) with DXd antibody.
Activity: Measured by its binding ability in a functional ELISA.
Immobilized T-DXd(DS-8201) at 2 µg/mL can bind DXd antibody (HY-P81054), the EC₅₀ is 1.120 to 1.566 ng/mL.

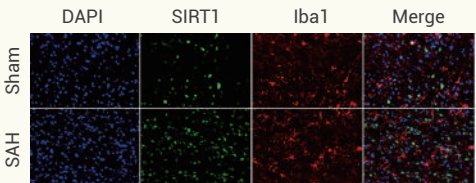
Customer Validations

1. HY-P80319: SIRT1 Antibody

J Inflamm Res. 2024 Mar 28;17:1971-1981. **Reactivity:** Human, Mouse; **Application:** WB, IF



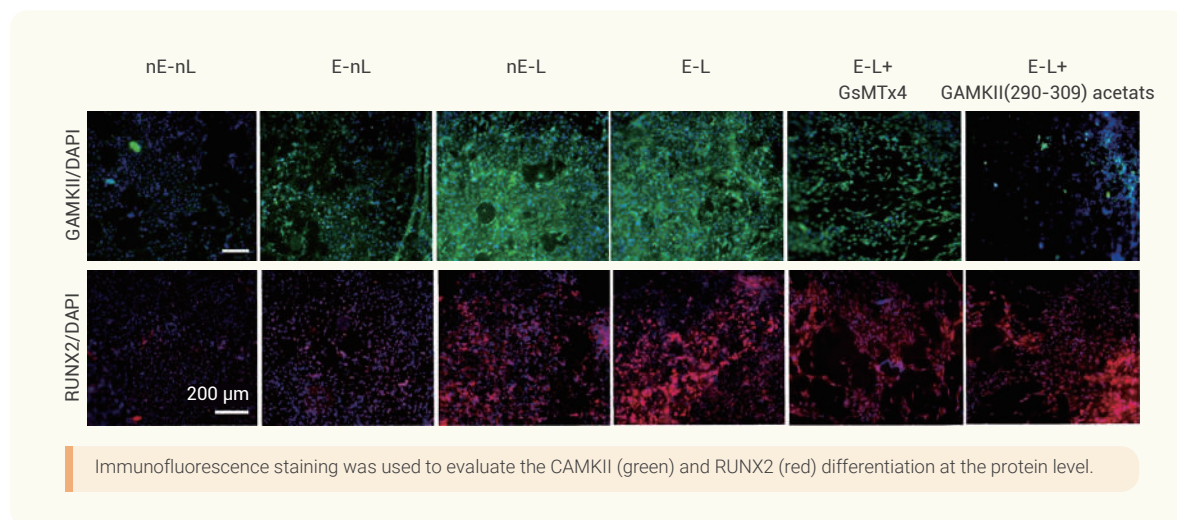
Western blot showed SIRT1 (HY-P80319) expression increased at 6 h and reached a peak at 24 h after SAH, and then decreased at 72 h.



Co-staining of SIRT1 (green, HY-P80319) and Iba1 (red) demonstrated that SIRT1 was upregulated in microglia 24 h after SAH.

2. RUNX2 Antibody (HY-P80445) +CaMKII alpha Antibody (HY-P80316)

Appl Mater Today. 2024 Feb, 36, 102026. **Reactivity:** Human; **Application:** IF



Antibody Selection Tips

Primary Antibody Selection:

1. **Target Protein:** Confirm the name of the target protein for your research (verify Gene ID).
2. **Reactivity:** Ensure the antibody's reactivity includes the species of your sample.
3. **Application:** Confirm that the antibody's application as stated in the instruction datasheet covers the experiments you intend to perform.

Secondary Antibody Selection:

1. **Host species:** The secondary antibody must be raised against the host species of the primary antibody. For instance, if the primary antibody was derived from mice, ensure the secondary antibody targets the mouse antibody (secondary antibodies can be sourced from a different species, eg. goat, rabbit, etc.).
2. **Conjugates:** Select the conjugated label for the secondary antibody based on different applications.

Application	Labeling types
WB/ELISA	Enzyme Labeling (HRP/AP) / Biotin Labeling / Fluorescent Labeling
IHC	Enzyme Labeling (HRP/AP) / Biotin Labeling
IF/ICC	Biotin Labeling / Fluorescent Labeling
FC	Biotin Labeling / Fluorescent Labeling

What are the requirements for antibodies in different experiments?

WB

WB (Western Blotting): Antibodies used in WB need to recognize the primary structures after protein denaturation after heating. Typically, antibodies are obtained by immunization with highly specific synthetic peptide sequences as antigens, thus ensuring high specificity.

IP/ChIP

IP/ChIP (Immunoprecipitation/Chromatin Immunoprecipitation): For IP, antibodies should recognize the native conformation of the antigen to facilitate binding and precipitation. Therefore, antibodies used in IP are preferably made from purified native proteins or recombinant proteins. ChIP is similar to IP, except that if the antibody recognizes a site where the protein binds to DNA, it may interfere with binding and lead to biased or failed experimental results.

IF/IHC

IF/IHC (Immunofluorescence/Immunohistochemistry): In these techniques, cells or tissue samples are immersed in fixatives that permeate cell membranes and react with biomolecules like proteins and nucleic acids, causing protein denaturation and fixation. Unlike WB, where heating causes complete denaturation, IF and IHC involve mild denaturation, preserving the spatial conformation of proteins. Therefore, antibodies used in IF/IHC can be purified recombinant proteins or synthetically derived peptides (with peptides exposed on the protein surface).

FC

FC experiments include both live cell analysis and fixed cell analysis, each with different antibody requirements. For live cell flow cytometry, antibodies against native or recombinant proteins are preferred, as they can recognize antigens on the cell surface or intracellularly, providing accurate and reliable information. For fixed cell analysis, antibody requirements are similar to those for IF/IHC experiments.

Antibody Selection Q&A:

Q: If my antibody works well in WB, can it be used for IF, IHC, and other experiments?

A: Not necessarily. The antibody may only target linear epitopes of the protein, with the antigenic peptide possibly buried inside the protein, thus recognizing only linear regions in WB.

Q: Can an antibody used for ChIP be used for WB?

A: Not necessarily. While most antibodies suitable for ChIP can be used for WB, those recognizing a conformational epitope (where sequences are spatially close but distant in a linear sequence) may not work for WB. Similarly, antibodies used for IP might not be suitable for WB, and those for IHC-P (with antigen retrieval) might not suit IHC-F (without retrieval).

Q: What should I do if the antibody datasheet does not specify its suitability for a particular experiment?

A: Proceed cautiously. Typically, the absence of specification indicates either the antibody hasn't been validated for that experiment or the validation results were unsatisfactory.

More References

Product Name	Application	Reactivity	References
HY-P80950/HY-P80951 Goat Anti-Mouse IgG H&L (FITC); Goat Anti-Rabbit IgG H&L (FITC)	IF	Mouse, Rabbit	Gut Microbes. 2025 Dec;17(1):2458184.
HY-P80765/HY-P80839 NF-KB p65 Antibody; Phospho-NF-KB p65 (Ser536) Antibody	WB	Human, Mouse	Adv Sci (Weinh). 2025 Feb;12(8):e2405483.
HY-P80043 Calreticulin Antibody	IF	Human	Adv Funct Mater. 2024 Jan 23. (doi: 10.1002/adfm.202314568)
HY-P80205 Lamin B1 Antibody	WB	Human	Adv Sci (Weinh). 2024 Aug 20:e2309754.
HY-P80506 Ki67 Antibody (YA322)	IHC	Mouse	Small. 2024 Aug 7:e2401551.
HY-P80319 SIRT1 Antibody	WB	Mouse	Aging Cell. 2024 Dec;23(12):e14325.
HY-P80324/HY-P80325 Smad2 Antibody; Smad3 Antibody	WB	Human	Drug Resist Updat. 2024 Sep;76:101115.
HY-P80757 Mouse IgG Isotype Control	FC	Mouse	Cancer Lett. 2024 May 1:589:216836.
HY-P80334/HY-P80846 SOX2 Antibody; Phospho-PI3 Kinase p85/p55 (Tyr467/Tyr199) Antibody	WB	Human, Mouse	Endocrine. 2024 Jun;84(3):1051-1063.
HY-P81234 Ki-67 Antibody	IHC	Mouse	Invest Ophthalmol Vis Sci. 2024 Feb 1;65(2):34.
HY-P80920 TREM2 Antibody	WB	Mouse	Phytomedicine. 2024 Jan 28, 155320.
HY-P80548 ASC Antibody	WB	Mouse	Curr Eye Res. 2024 Mar 7:1-10.
HY-P80865 PI3 Kinase p110 gamma Antibody (YA690)	WB	Human	Arch Biochem Biophys. 2024 May:755:109965.
HY-P80843 Phospho-p53 (Ser37) Antibody	WB	Human	Cell Cycle. 2024 Feb;23(3):308-327.

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