

## MedChemExpress Induced Disease Models Products



MORE PRODUCTS

Animal models of human disease refer to the establishment of animal experimental subjects and related materials with the simulated performance of human disease in biological, medical and pharmaceutical research. Animal disease models overcome the limitations of clinical trials using human subjects and play a critical role in the exploration and characterization of disease pathophysiology, target identification, and the in vivo evaluation of therapeutic drugs and treatments.

MedChemExpress (MCE) offers biological and chemical products that induce a wide range of disease models, including cancer, endocrine system, immune and inflammatory system, nervous system, cardiovascular system, respiratory system, digestive system, etc., to meet your diverse research needs.









# Publications Citing Use Of MedChemExpress Induced Disease Model Products

Cell. 2023 Sep 28;186(20):4454-4471.e19.

Nature. 2023 Jun;618(7964):374-382.

Nat Microbiol. 2023 Mar;8(3):410-423.

Nat Nanotechnol. 2023 Apr;18(4):390-402.

Cell Stem Cell. 2023 Apr 6;30(4):450-459.e9.

Nat Commun. 2023 Feb 28:14(1):971

**Nat Commun.** 2023 Feb 28;14(1):971. **Adv Mater.** 2023 Jan 19:e2210787.

Cell Discov. 2023 Jan 3;9(1):1.

Cell. 2022 Aug 4;185(16):3008-3024.e16.

Cell Metab. 2022 Feb 7;34(3):424-440.e7.

Nature. 2021 Feb;590(7847):612-617.

Signal Transduct Target Ther. 2023 Feb 3;8(1):51.

Signal Transduct Target Ther. 2021 Feb 24;6(1):77.

Nat Metab. 2021 Dec;3(12):1706-1726



#### **Cancer Models**

Cat. No.	Product Name	Disease Model
HY-34758	N-Nitroso-N-methylurea (MNU)	A direct-acting alkylating agent that interacts with DNA. Mainly induced <b>breast tumor models</b> , also can be used to induce <b>cervical tumor</b> , <b>ovarian tumor</b> , and <b>glial tumor models</b> .
HY-111375	Azoxymethane	A colon carcinogen which leads to the formation of DNA adducts. Induced <b>colon tumor models</b> .
HY-N6615	Aflatoxin B1	A Class 1A carcinogen. Induced liver tumor models.
HY-W011845	DMBA	A polycyclic aromatic hydrocarbon (PAH) with carcinogenic activity. Induced <b>skin tumor models</b> .
HY-145157	Ferric Nitrilotriacetate	Fe-NTA, a complexation of nitriloacetic acid with iron, is a highly reactive compound. Induced <b>liver tumor</b> and <b>kidney tumor models</b> .

## Immunology & Inflammatory Disease Models

Cat. No.	Product Name	Disease Model
HY-18739	Phorbol 12-myristate 13-acetate	PMA, a dual SphK and protein kinase C (PKC) activator. Induced <b>dermatitis models</b> .
HY-17420	Cyclophosphamide	A synthetic alkylating agent. Induced <b>cystitis models</b> and <b>myocarditis models</b> .
HY-153808	Complete Freund's Adjuvant (CFA)	An immunoadjuvant emulsified with antigen, enhance an animal's immune response to an antigen. Induced <b>arthritis models</b> .
HY-P1240A	MOG (35-55) (TFA)	A minor component of CNS myelin. Induced <b>encephalomyelitis models</b> .
HY-116282C	Dextran Sulfate Sodium Salt (MW 35000-45000)	DSS, a polymer of anhydroglucose. Induced IBD models.

## Cardiovascular System Disease Models

Cat. No.	Product Name	Disease Model
HY-15142	Doxorubicin Hydrochloride	A cytotoxic anthracycline antibiotic, anti-cancer chemotherapy agent. Induced <b>heart disease models</b> .
HY-13948	Angiotensin II Human	Ang II, a vasoconstrictor and a major bioactive peptide of the renin/ angiotensin system. Induced <b>hypertension models</b> .
HY-N0322	Cholesterol	The major sterol in mammals. Induced hyperlipidemia models.

## **Nervous System Disease Models**

Cat. No.	Product Name	Disease Model
HY-114153	PLX5622	An orally active CSF1R inhibitor, microglial cells elimination tool compound.
HY-15608	MPTP Hydrochloride	A brain penetrant dopamine neurotoxin. Induced Parkinson's disease models.
HY-P0128 HY-P1388	β-Amyloid (25-35) β-Amyloid (1-42)	The fragment A $\beta$ (25-35) of the Alzheimer's amyloid $\beta$ -peptide. Induced Alzheimer's disease models.
HY-N0219	Bicuculline	A competitive neurotransmitter GABAA receptor antagonist. Induced <b>convulsion models</b> .
HY-15084	Dizocilpine Maleate	MK-801 Maleate, a non-competitive NMDA receptor antagonist. Induced schizophrenia models.

## **Respiratory System Disease Models**

Cat. No.	Product Name	Disease Model
HY-17565A	Bleomycin Hydrochloride	BLM, a DNA synthesis inhibitor. Induced <b>pulmonary fibrosis models</b> .
HY-14188	Amiodarone Hydrochloride A Class III antiarrhythmic agent. Induced pulmonary fibrosis models.	

## **Digestive System Disease Models**

Cat. No.	Product Name	Disease Model
HY-A0190	Ceruletide	A potent cholecystokinin receptor agonist. Induced pancreatitis models.
HY-66005	Acetaminophen	A selective cyclooxygenase-2 (COX-2) inhibitor. Induced liver injury models.
HY-14397	Indomethacin	A orally active COX1/2 inhibitor. Induced gastric ulcer models.

### **Endocrine & Metabolic Disease Models**

Cat. No.	Product Name	Disease Model
HY-14648	Dexamethasone	Dex, a glucocorticoid receptor agonist. Induced muscle atrophy models.
HY-13753	Streptozocin (STZ)	A potent DNA-methylating antibiotic. Induced diabetes models.
HY-B0152	Adenine	Vitamin B4, Purine, one of the four nucleobases in the nucleic acid of DNA. Induced <b>high uric acid models</b> .

#### **Urinary System Disease Models**

Cat. No.	Product Name	Disease Model
HY-107911	Protamine Sulfate	A positively charged polypeptide. Induced <b>cystitis models</b> .
HY-B0671	Vancomycin	An antibiotic that alters the permeability of the cell membrane and selectively inhibits ribonucleic acid synthesis. Induced <b>kidney injury models</b> .

## **Genetically Engineered Disease Models**

Cat. No.	Product Name	Disease Model
HY-13757A	Tamoxifen	An orally active, selective estrogen receptor modulator. Induced <b>gene knockout of Cre-ERT2 transgenic</b> mouse.
HY-N0565	Doxycycline	An orally active tetracycline antibiotic. Induced <b>gene expression models</b> in transgenic mice.

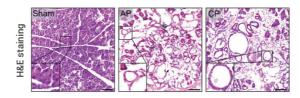
## **Customer Verification**

#### Induced Pancreatitis Model In Mice

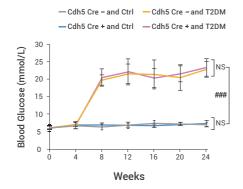
Caerulein (HY-A0190)

PUBLISHED LITERATURE FROM MCE CLIENTS:

Cell Discov. 2023 Jan 3;9(1):1.



Acute pancreatitis (AP) was induced by intraperitoneal injection of 50 µg/kg caerulein in mice, and pancreatic tissue was collected 48h (acute pancreatitis stage) after injury for analysis. H&E staining of pancreatic sections revealed a marked increase of tubular cells in the AP mice.



#### Induced Diabetic Model In Mice

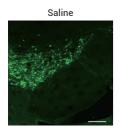
Streptozocin (HY-13753)

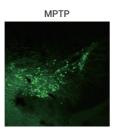
PUBLISHED LITERATURE FROM MCE CLIENTS:

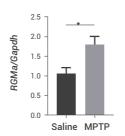
Cardiovasc Diabetol. 2023 May 6;22(1):107.

A high-fat diet (HFD) for 6 weeks was followed by intraperitoneal injection of 40 mg/kg streptozotocin (STZ). The dynamic monitoring of blood glucose levels showed that the blood glucose of T2DM mice was ≥16.7 mM after STZ injection, and the blood glucose of control mice was within the normal range during the whole study period.

Inhibitors • Screening Libraries • Proteins







#### Induced Parkinson's Disease Model In Mice

MPTP (HY-15608)

PUBLISHED LITERATURE FROM MCE CLIENTS: **Cell Death Dis.** 2021 Feb 15;12(2):181.

The brains were removed after perfusion-fixation 21 days post MPTP (30mg/kg) injection. Immunofluorescence results showed that MPTP treatment reduced TH-positive neurons in the SN. *RGMa* expression in SN was significantly increased by MPTP injection.

#### Induced Pulmonary Fibrosis Model In Mice

#### Bleomycin Hydrochloride (HY-17565A)

PUBLISHED LITERATURE FROM MCE CLIENTS: Sci China Life Sci. 2023 Jun 16.

The mice were intraperitoneally anesthetized with 1% pentobarbital sodium, and intratracheally administered

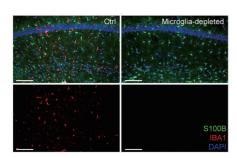
PBS Lip BLM BLM+Lip Scr siRNA Lip Plek siRNA Lip

US SEW

PBLM BLM+Lip Scr siRNA Lip Plek siRNA Lip

100 un

1 mg/kg BLM in  $30 \,\mu\text{L}$  PBS using a high-pressure atomizing needle. Severe lung injury and aberrant collagen accumulation were observed in the liposome and scrambled siRNA-loaded liposome groups at 21 days after BLM induction.





## Induced Microglial Depletion Model PLX5622 (HY-114153)

PUBLISHED LITERATURE FROM MCE CLIENTS: **Nature.** 2021 Feb;590(7847):612-617.

Eight-week-old mice were fed a diet containing PLX5622 (1200 ppm) for 4 weeks. Brain sections of the mice were labeled with IBA1+ (microglia marker) by immunofluorescence to detect microglia depletion.

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