

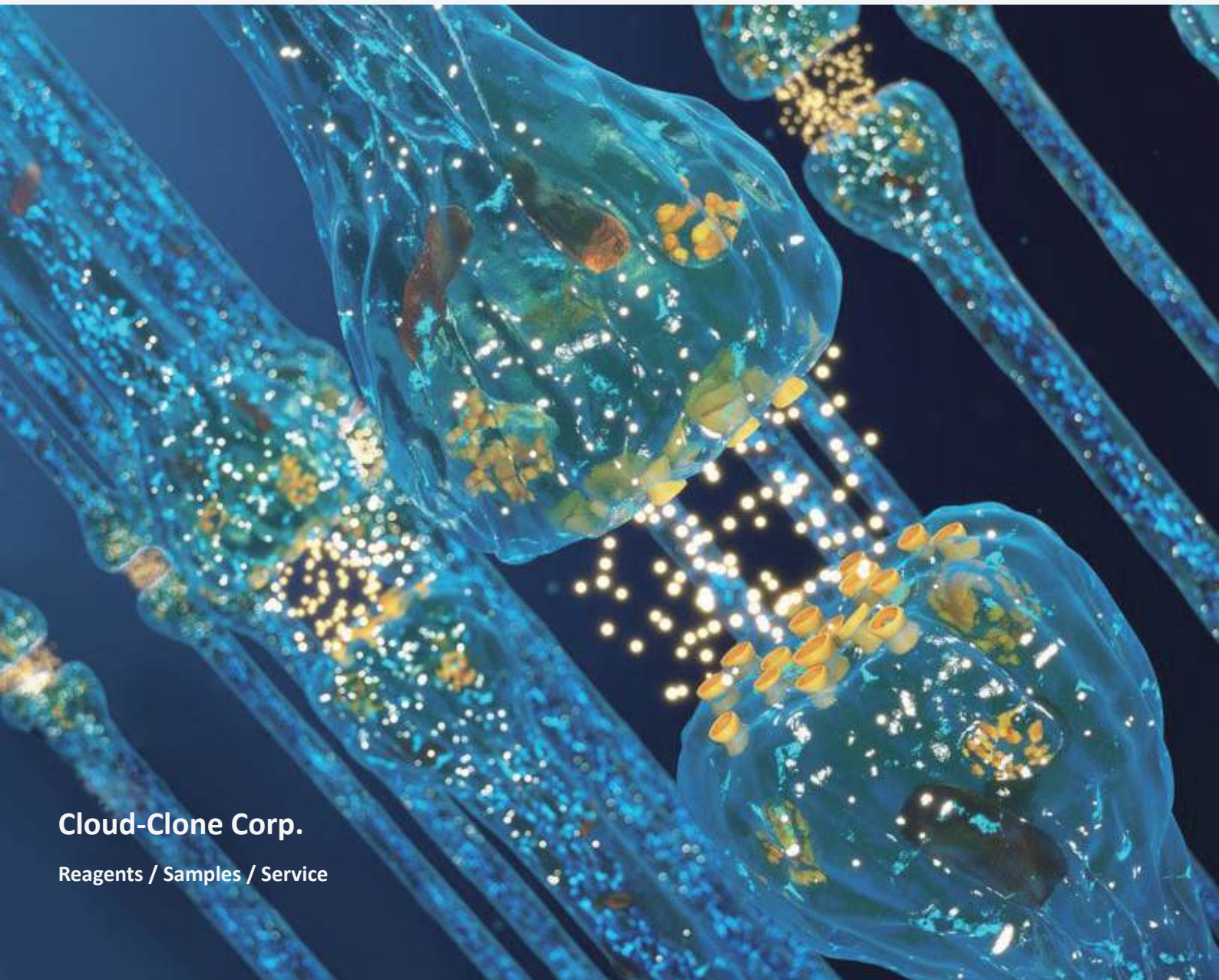


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# Cloud-Clone Neuroscience Diseases Related Products

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The Neuroscience is a system that plays a dominant role in the regulation of physiological functions in the body. It is mainly composed of nerve tissue and is divided into two parts: the central nervous system and the peripheral nervous system. The central nervous system in turn includes the brain and spinal cord, and the peripheral nervous system includes the cranial nerves and spinal nerves. In biological individuals, the nervous system exercises the role of "command" and controls the coordination of various tissues and organs of the body. Neurological diseases may be caused by external factors or personal genetic factors, including cerebrovascular diseases, periodic paralysis, progressive muscular dystrophy, myotonic dystrophy, and ataxia. Nervous system diseases are difficult to cure at the current medical level, mainly relying on early prevention and treatment. Therefore, early diagnosis and early intervention are of great significance for improving the long-term prognosis of neurological diseases.

With the rapid development of genomics, proteomics and metabolomics, some indicators related to the occurrence or development of nervous system diseases, such as BDNF, GFAP, SAA, etc., have been found to be early diagnosis of some neurological diseases.

**1100+**  
**Citations**

**56**  
**Targets**

**Protein**

**Antibody**

**ELISA Kit**

## 1. Excellent citations of Neuroscience Diseases related products(Excerpt)

Item	Species	Core No.	Journals	IF	Pubmed/DOI	Institute
NE	General	A907	Nature	64.8	33177714	Wuhan University
CCK	Mouse	A802	Cell	64.5	36669474	Hefei National Research Center for Physical Sciences at the Microscale
CGRP	Human	A876	Gastroenterology	29.4	28483500	Department of Medicine, Farncombe Family Digestive Health Research Institute
NE	General	A907	Journal of the American College of Cardiology	24	31558254	Xinhua Hospital Affiliated to Shanghai Jiaotong University School of Medicine
BNP	Rat	A541	ACS Nano	17.1	37278622	College of Textiles, Donghua University
NPS	Human	A796	Sci Transl Med	17.1	34433639	University of Oxford, Women's Centre, John Radcliffe Hospital
GFAP	Human	A068	JAMA Surgery	16.9	28593326	Icahn School of Medicine at Mount Sinai
CGRP	Human	A876	Nature Communications	16.6	35668093	The First Affiliated Hospital of Nanjing Medical University
GFAP	Mouse	A876	Journal of Clinical Investigation	15.9	29634489	German Center for Neurodegenerative Diseases (DZNE) Berlin
CRF	Human	A835	Asian J Psychiatr	9.5	36516698	Faculty of Medicine, Chiang Mai University

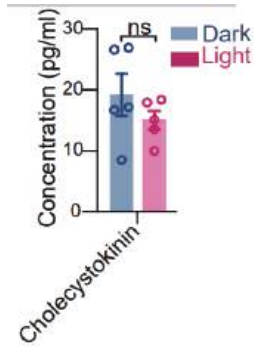


Figure . Levels of glucometabolism-relevant hormones(**CCK**) or nutrients under light/dark conditions. (Tian Xue, 2023)  
(Product No.: CEA802Mu Sample type:serum)

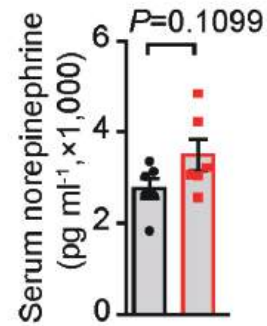


Figure . The serum levels of **noradrena** was measured using ELISA kits. (Bao-Liang Song, 2020)  
(Product No.: CEA907Ge Sample type:serum)

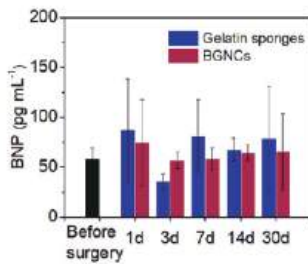


Figure . Serum **BNP** concentration of rats during 30 days postsurgery. (Bin Ding, 2023)  
(Product No.: SEA541Ra Sample type:serum)

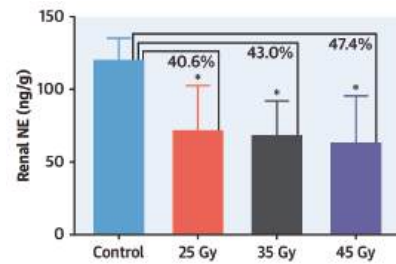


Figure . Renal tissue norepinephrine (**NE**) concentration and mean percentage reduction relative to the control group in treatment groups. (Xingxing Cai, 2019)  
(Product No.: CEA907Ge Sample type:serum)

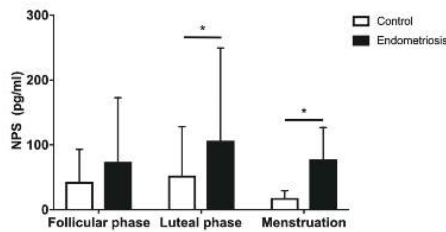


Figure . The amount of **NPS** in the PF of patients and ' controls was measured by ELISA. (Thomas T Tapmeier 2021)  
(Product No.: CEA796Hu Sample type:serum)

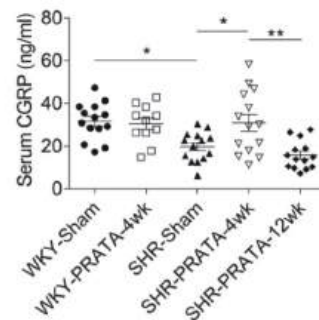


Figure . Serum or plasma levels of **CGRP** assessed by ELISA post PRATA in chronic (a) or acute (b) experiments. (Peng Li, 2022)  
(Product No.: CEA876Hu Sample type:serum)

## 2. Citation statistics of Neuroscience Diseases related products (Excerpt)

### Brain Derived Neurotrophic Factor (BDNF)

Product	Species	Citation
Protein / Antibody / ELISA kit	Human, Rat, Mouse, Rabbit, Pig,Dog, Chicken	95
Excerpt: 1. Chen P C, Hsieh M H, Kuo W S, et al. Water-soluble chitosan inhibits nerve growth factor and attenuates allergic inflammation in mite allergen-induced allergic rhinitis[J]. Journal of Allergy and Clinical Immunology, 2017, 140(4): 1146-1149. e8. (IF=13.258) 2. Qi F, Zuo Z, Hu S, et al. An enriched environment restores hepatitis B vaccination-mediated impairments in synaptic function through IFN- $\gamma$ /Arginase1 signaling[J]. Brain, behavior, and immunity, 2018. (IF=6.306) 3. Li W, Li K, Gao J, et al. Autophagy is required for human umbilical cord mesenchymal stem cells to improve spatial working memory in APP/PS1 transgenic mouse model[J]. Stem cell research & therapy, 2018, 9(1): 9. (IF=4.963)		

### Melatonin (MT)

Product	Species	Citation
Protein / Antibody / ELISA kit	General	81
Excerpt: 1. Szewczyk-Golec K, Rajewski P, Gackowski M, et al. Melatonin supplementation lowers oxidative stress and regulates adipokines in obese patients on a calorie-restricted diet[J]. Oxidative medicine and cellular longevity, 2017, 2017. (IF=4.936) 2. Özdem M, Kızıoğlu F Y, Yılmaz H R, et al. Antioxidant effects of melatonin in heart tissue after induction of experimental periodontitis in rats[J]. Journal of oral science, 2017, 59(1): 23-29. 3. Budkowska M, Ostrycharz E, Wojtowicz A, et al. A Circadian Rhythm in both Complement Cascade (ComC) Activation and Sphingosine-1-Phosphate (S1P) Levels in Human Peripheral Blood Supports a Role for the ComC-S1P Axis in Circadian Changes in the Number of Stem Cells Circulating in Peripheral Blood[J]. Stem Cell Reviews and Reports, 2018: 1-9.		

### S100 Calcium Binding Protein B (S100B)

Product	Species	Citation
Protein / Antibody / ELISA kit	Human, Rat, Mouse, Rabbit	61
Excerpt: 1. Erşahin M, Özdemir Z, Özşavcı D, et al. Melatonin treatment protects against spinal cord injury induced functional and biochemical changes in rat urinary bladder[J]. Journal of pineal research, 2012, 52(3): 340-348. (IF=11.613) 2. Chen K, Sun Y J, Dong W, et al. Activated A7nacr Improves Postoperative Cognitive Dysfunction and Intestinal Injury Induced by Cardiopulmonary Bypass in Rats: Inhibition of the Proinflammatory Response Through the Th17 Immune Response[J]. Cellular Physiology and Biochemistry, 2018, 46(3): 1175-1188. (IF=5.5) 3. Jeremias I C, Victorino V J, Machado J L, et al. The severity of cecal ligature and puncture-induced sepsis correlates with the degree of encephalopathy, but the sepsis does not lead to acute activation of spleen lymphocytes in mice[J]. Molecular neurobiology, 2016, 53(5): 3389-3399. (IF=5.076)		



## Glial Fibrillary Acidic Protein (GFAP)

Product	Species	Citation
Protein / Antibody / ELISA kit	Human, Rat, Mouse,Bovine	55
<p>Excerpt:</p> <ol style="list-style-type: none"><li>1. Johansson P I, Sørensen A M, Perner A, et al. High sCD40L levels early after trauma are associated with enhanced shock, sympathoadrenal activation, tissue and endothelial damage, coagulopathy and mortality[J]. Journal of Thrombosis and Haemostasis, 2012, 10(2): 207-216. (IF=4.899)</li><li>2. Tskitishvili E, Pequeux C, Munaut C, et al. Estrogen receptors and estetrol-dependent neuroprotective actions: a pilot study[J]. Journal of Endocrinology, 2017, 232(1): 85-95.</li><li>3. Rodriguez Cruz Y, Strehaiano M, Rodriguez Obaya T, et al. An Intranasal Formulation of Erythropoietin (Neuro-EPO) Prevents Memory Deficits and Amyloid Toxicity in the APP Swe Transgenic Mouse Model of Alzheimer's Disease[J]. Journal of Alzheimer's Disease, 2017, 55(1): 231-248.</li></ol>		

## Enolase, Neuron Specific (NSE)

Product	Species	Citation
Protein / Antibody / ELISA kit	Human, Rat, Mouse, Rabbit, Pig,Dog, Chicken	50
<p>Excerpt:</p> <ol style="list-style-type: none"><li>1. Erşahin M, Özdemir Z, Özsvacı D, et al. Melatonin treatment protects against spinal cord injury induced functional and biochemical changes in rat urinary bladder[J]. Journal of pineal research, 2012, 52(3): 340-348. (IF=11.613)</li><li>2. Chen K, Wang N, Diao Y, et al. Hydrogen-rich saline attenuates brain injury induced by cardiopulmonary bypass and inhibits microvascular endothelial cell apoptosis via the PI3K/Akt/GSK3<math>\beta</math> signaling pathway in rats[J]. Cellular Physiology and Biochemistry, 2017, 43(4): 1634-1647. (IF=5.5)</li><li>3. Erşahin M, Toklu H Z, Erzik C, et al. The anti-inflammatory and neuroprotective effects of ghrelin in subarachnoid hemorrhage-induced oxidative brain damage in rats[J]. Journal of neurotrauma, 2010, 27(6): 1143-1155.</li></ol>		

## Dopamine (DA)

Product	Species	Citation
Protein / Antibody / ELISA kit	General	50
<p>Excerpt:</p> <ol style="list-style-type: none"><li>1. Abdelkader N F, Safar M M, Salem H A. Ursodeoxycholic acid ameliorates apoptotic cascade in the rotenone model of Parkinson's disease: modulation of mitochondrial perturbations[J]. Molecular neurobiology, 2016, 53(2): 810-817. (IF=5.076)</li><li>2. Safar M M, Arab H H, Rizk S M, et al. Bone marrow-derived endothelial progenitor cells protect against scopolamine-induced Alzheimer-like pathological aberrations[J]. Molecular neurobiology, 2016, 53(3): 1403-1418. (IF=5.076)</li></ol>		

## Nerve Growth Factor (NGF)

Product	Species	Citation
Protein / Antibody / ELISA kit	Human, Rat, Mouse, Rabbit, Pig, Dog,Chicken,Sheep, Monkey	50

**Excerpt:**

1. Navone S E, Peroglio M, Guarnaccia L, et al. Mechanical loading of intervertebral disc modulates microglia proliferation, activation, and chemotaxis[J]. Osteoarthritis and cartilage, 2018. (IF=5.454)
2. Li W, Li K, Gao J, et al. Autophagy is required for human umbilical cord mesenchymal stem cells to improve spatial working memory in APP/PS1 transgenic mouse model[J]. Stem cell research & therapy, 2018, 9(1): 9. (IF=4.963)

**Calcitonin Gene Related Peptide (CGRP)**

Product	Species	Citation
Protein / Antibody / ELISA kit	Human, Rat, Mouse	42

**Excerpt:**

1. Pinto-Sanchez M I, Hall G B, Ghajar K, et al. Probiotic Bifidobacterium longum NCC3001 reduces depression scores and alters brain activity: a pilot study in patients with irritable bowel syndrome[J]. Gastroenterology, 2017, 153(2): 448-459. e8. (IF=20.773)
2. Kälén S, Miller K R, Kälén R E, et al. CNS myeloid cells critically regulate heat hyperalgesia[J]. The Journal of clinical investigation, 2018, 128(7) (IF=13.251)

**5-Hydroxytryptamine (5-HT)**

Product	Species	Citation
Protein / Antibody / ELISA kit	General	37

**Excerpt:**

1. Raghavendran H R B, Rekha S, Cho H K K J H, et al. Ginsenoside rich fraction of Panax ginseng CA Meyer improve feeding behavior following radiation-induced pica in rats[J]. Fitoterapia, 2012, 83(6): 1144-1150.
2. Zhao J, Niu C, Wang J, et al. The depressive-like behaviors of chronic unpredictable mild stress-treated mice, ameliorated by Tibetan medicine Zuotai: involvement in the hypothalamic-pituitary-adrenal (hPa) axis pathway[J]. Neuropsychiatric disease and treatment, 2018, 14: 129.

**Gonadotropin Releasing Hormone (GnRH)**

Product	Species	Citation
Protein / Antibody / ELISA kit	Human, Rat, Mouse	23

**Excerpt:**

1. Ye X, Li F, Zhang J, et al. Pyrethroid Insecticide Cypermethrin Accelerates Pubertal Onset in Male Mice via Disrupting Hypothalamic-Pituitary-Gonadal Axis[J]. Environmental Science & Technology, 2017, 51(17): 10212-10221. (IF=6.653)
2. Wang X, Bai Y, Tang C, et al. Impact of perfluorooctane sulfonate on reproductive ability of female mice through suppression of estrogen receptor  $\alpha$ -activated kisspeptin neurons[J]. T

**Corticotropin Releasing Hormone (CRH)**

Product	Species	Citation
Protein / Antibody / ELISA kit	Human, Rat, Mouse	21

Excerpt:

1. Bove M, Mhillaj E, Tucci P, et al. Effects of n-3 PUFA enriched and n-3 PUFA deficient diets in naïve and A $\beta$ -treated female rats[J]. Biochemical pharmacology, 2018, 155: 326-335.
2. Oh D R, Yoo J S, Kim Y, et al. Vaccinium bracteatum Leaf Extract Reverses Chronic Restraint Stress-Induced Depression-Like Behavior in Mice: Regulation of Hypothalamic-Pituitary-Adrenal Axis, Serotonin Turnover Systems, and ERK/Akt Phosphorylation[J]. Frontiers in pharmacology, 2018, 9.

### 3. Cloud-Clone Neuroscience Diseases related targets

Cloud-Clone Neurology related targets									
Target	Core No.	Target	Core No.	Target	Core No.	Target	Core No.	Target	Core No.
5-HT	A808	CR	A687	HEXb	A637	NMS	A828	Pk2	A115
ACH	A912	CRH	A835	KLK6	A691	NOSTRIN	A628	PKBg	A382
ADAM8	A620	DA	A851	KLK8	A690	NOX1	A554	PKCg	A419
AGER	A645	DNHD1	U491	MAG	A422	NPS	A796	S100B	A567
Alk-Smase	A801	dSIP	A708	MAP1A	A338	NPTX1	A298	Slit2	A672
AQP4	A582	gABA	A900	MBP	A539	NPTX2	A299	SNCa	B222
bACE1	A718	GAL	B084	MOG	A421	NRP1	A692	SNCg	A939
BDNF	A011	GDH	A293	MT	A908	NSE	A537	TRH	A839
CDK5	A739	GDNF	A043	NES	A500	NT3	A106		
CECR1	L307	GFAP	A068	NGB	A606	NT4	A107		
CGRP	A876	GnRH	A843	NGF	A105	PER1	M012		
CNTF	A021	GSTa4	A659	NMB	A803	PGD2S	A724		

### 4. Cloud-Clone Neuroscience Diseases Related Animal Models

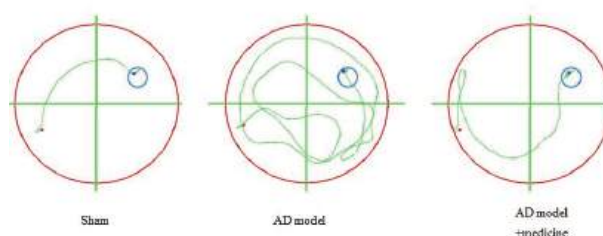
#### Rat Model for Alzheimer Disease (AD) • DSI707Ra01

SD rats were anesthetized with 1% pentobarbital sodium (40ug/g) intraperitoneal injection, then fixed on the stereotaxic apparatus. According to the rat stereotaxic apparatus map, bregma is origin and puncture is 3.5 mm behind the origin. Cut 2mm along the right side of the central line, open the harnpan with a dental drill, using a micro syringe insert 3mm from brain surface, (AP=-3.5 mm, ML=2.0 mm, DV=3.0 mm). Bilateral hippocampal CA1 region was injected with A $\beta$ 1-40 (10ug (1 $\mu$ L)) respectively, retain the needle 5min, then suture wound. 3 days after modeling, caudal vein injection of normal saline, drug given for 100 $\mu$ l/day last 21 days, behavior detection of Morris.

#### Modeling Result



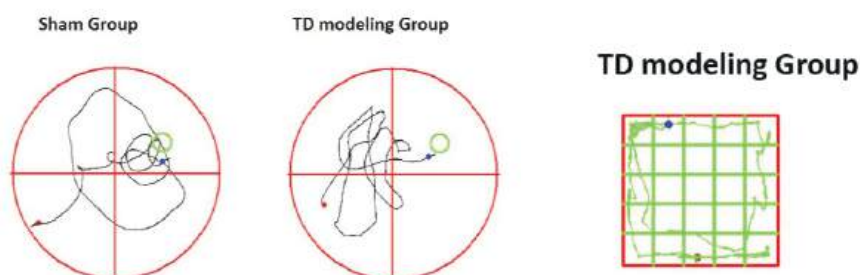
Trajectory chart of Water maze experiment



## Rat Model for Tourette Syndrome (TS) • DSI550Ra01

1. The rats were injected intraperitoneally with 3,3'-iminodipropionitrile (IDPN), and the dose: 300 mg/(kg.d) for continuous administration for 7 days.
2. After modeling, the rats were given intragastric administration at the same time every morning. The blank group and model group were given normal saline. The intragastric dose was 1mL/100g.

### Modeling Result

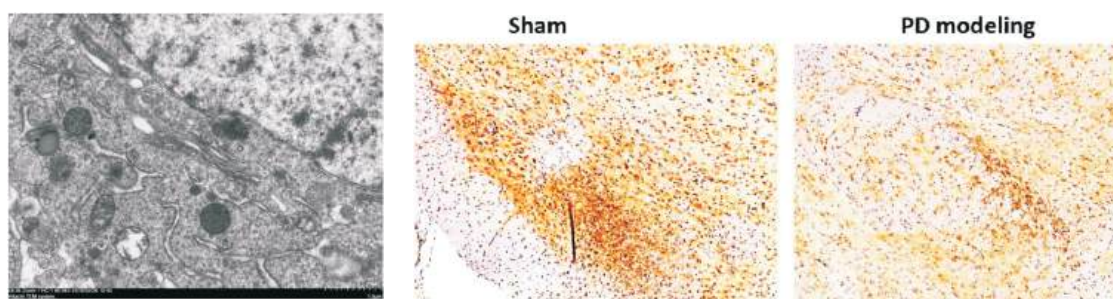


## Mouse Model for Parkinson's Disease (PD) • DSI710Mu02

MPTP was intraperitoneally injected 20mg/kg/d for 14 consecutive days. The control group was intraperitoneal injection with equal volume of normal saline, and the operation and precautions were the same. After MPTP administration, the model was established successfully.

Drugs to be treated with appropriate drugs; The normal group and PD model group were intraperitoneal injected with equal volume PBS, and the operation and precautions were the same.

### Modeling Result



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Original Manufacturer for Reagents, Samples and Services

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