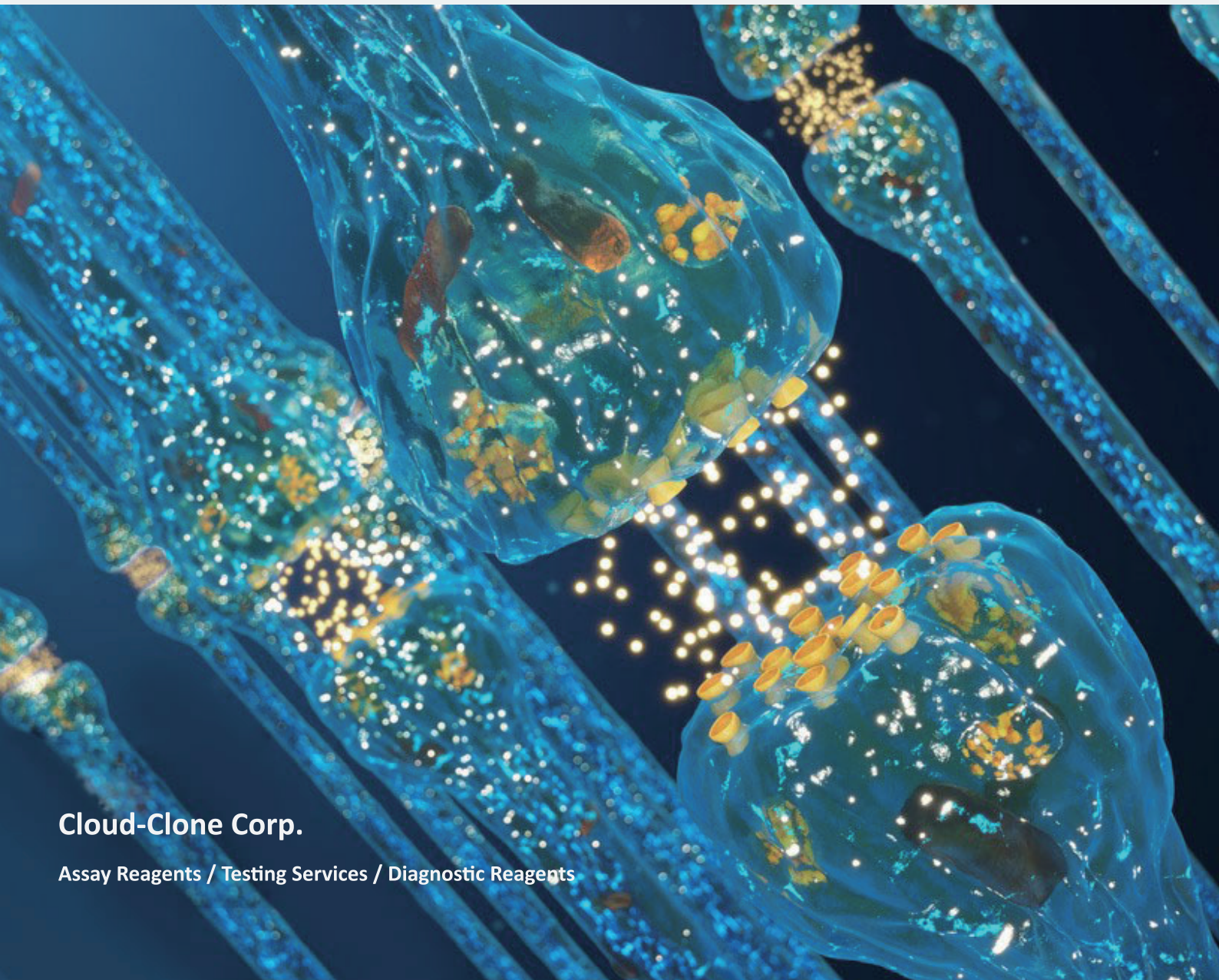




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Cloud-Clone Nervous System Diseases Related Products



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Assay Reagents / Testing Services / Diagnostic Reagents



ISO 13485

ISO 9001

The nervous system 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 control 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.

480+
Citations

54
Targets

Protein

Antibody

ELISA Kit

1. Excellent citations of Nervous System Diseases related products(Excerpt)

Target	Species	Core No.	Journal	IF	Pubmed ID	Institute
CGRP	Human	A876	Gastroenterology	20.773	28483500	Department of Medicine, Farncombe Family Digestive Health Research Institute, McMaster University
BDNF	Multiple	A011	Journal of Allergy and Clinical Immunology	13.258	28412394	Institute of Basic Medical Sciences, College of Medicine, National Cheng Kung University
GAL	Human	B084	Journal of clinical investigation	13.251	28796366	Gravitational Physiology and Medicine Research Unit, Institute of Physiology, Medical University of Graz
SNCa	Mouse	B222	Journal of clinical investigation	13.251	22922254	KineMed Inc., Emeryville, California
NSE	Rat	A537	Journal of Pineal Research	11.613	doi:10.1111/j.1600-079X.2011.00948.x	Department of Pharmacology, School of Pharmacy, Marmara University
S100B	Rat	A567	Journal of Pineal Research	11.613	doi:10.1111/j.1600-079X.2011.00948.x	Department of Pharmacology, School of Pharmacy, Marmara University
AQP4	Human	A582	Neurology	8.055	20644148	Department of Neurology, Tohoku University Graduate School of Medicine
NGF	Bovine	A105	Osteoarthritis and Cartilage	5.454	29723636	Laboratory of Experimental Neurosurgery and Cell Therapy, University of Milan
DA	All species	A851	Molecular Neurobiology	5.076	25502462	Department of Pharmacology and Toxicology, Faculty of Pharmacy, Cairo University
MT	All species	A908	Oxidative Medicine and Cellular Longevity	4.936	29142618	Chair of Medical Biology, Ludwik Rydygier Collegium Medicum of Nicolaus Copernicus University

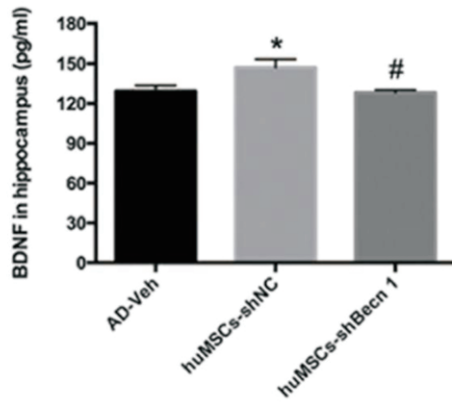


Figure . The effect of huMSC transplantation on brain-derived neurotrophic factor (BDNF) secretion in the hippocampus by ELISA. (Wen Li, 2018)
(Product No.: SEA011Mu Sample type: brain lysates)

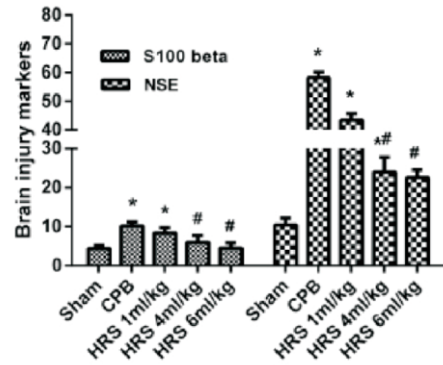


Figure . Brain injury marker (S-100β, NSE) expression levels measured by ELISA. Compared with the sham group, *P<0.05. Compared with the CPB group,# P<0.05.(Keyan Chen, 2017)
(Product No.: SEA537Ra Sample type: plasma)

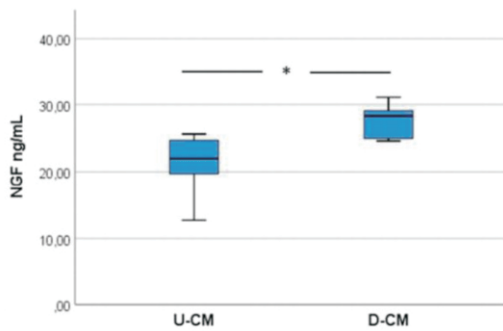


Figure . Media were analysed for released cytokines on commercial ELISA assays. Production of NGF performed on D-CM and U-CM. (Stefania Elena Navone, 2018)
(Product No.: SEA105Bo Sample type: tissue homogenate)

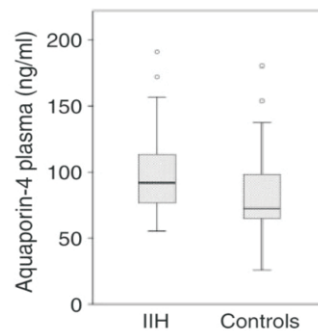


Figure . CSF and plasma levels (b, d, f, h) of aquaporin-4 (AQP4) of patients and controls. (Kathrin Doppler, 2016)
(Product No.: SEA582Hu Sample type: plasma)

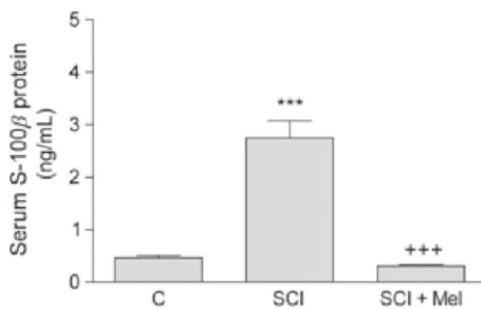


Figure . Serum soluble protein-100b (S-100B) levels of the control, vehicle-treated spinal cord injury (SCI), and melatonin (Mel)-treated SCI groups. (Mehmet Ers , ahin , 2012)
(Product No.: SEA567Ra Sample type: serum)

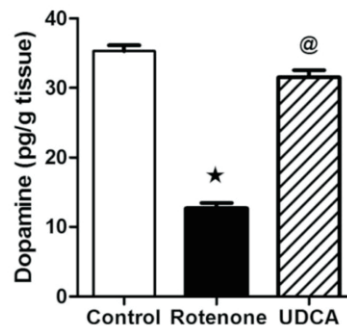


Figure . Effects of UDCA on rotenone-induced alterations in striatal DA content in rats. (Noha F. Abdelkader, 2014)
(Product No.: CEA851Ge Sample type: tissue homogenate)

2. Citation statistics of Nervous System Diseases related products (Excerpt)

Melatonin (MT)

Product	Species	Citation
Protein / Antibody / ELISA kit	General	69

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, Kırzioğlu 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.

Brain Derived Neurotrophic Factor (BDNF)

Product	Species	Citation
Protein / Antibody / ELISA kit	Human, Rat, Mouse, Rabbit, Pig,Dog, Chicken	68

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- γ /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)

Enolase, Neuron Specific (NSE)

Product	Species	Citation
Protein / Antibody / ELISA kit	Human, Rat, Mouse, Rabbit, Pig,Dog, Chicken	42

Excerpt:

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)
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 β signaling pathway in rats[J]. *Cellular Physiology and Biochemistry*, 2017, 43(4): 1634-1647. (IF=5.5)
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.

Glial Fibrillary Acidic Protein (GFAP)

Product	Species	Citation
Protein / Antibody / ELISA kit	Human, Rat, Mouse,Bovine	41

Excerpt:

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)
2. Tskitishvili E, Pequeux C, Munaut C, et al. Estrogen receptors and estretrol-dependent neuroprotective actions: a pilot study[J]. Journal of Endocrinology, 2017, 232(1): 85-95.
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.

S100 Calcium Binding Protein B (S100B)

Product	Species	Citation
Protein / Antibody / ELISA kit	Human, Rat, Mouse, Rabbit	38

Excerpt:

1. Erşahin M, Özdemir Z, Özsaveci 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 A7nachr 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 ligation 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)

Dopamine (DA)

Product	Species	Citation
Protein / Antibody / ELISA kit	General	36

Excerpt:

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)
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)

Nerve Growth Factor (NGF)

Product	Species	Citation
Protein / Antibody / ELISA kit	Human, Rat, Mouse, Rabbit, Pig, Dog,Chicken,Sheep, Monkey	36

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	32

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. Kälin S, Miller K R, Kälin 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	21

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	18

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 α -activated kisspeptin neurons[J]. *T*

Corticotropin Releasing Hormone (CRH)

Product	Species	Citation
Protein / Antibody / ELISA kit	Human, Rat, Mouse	17

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 β -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 Nervous System 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 Nervous System Diseases Related Animal Models

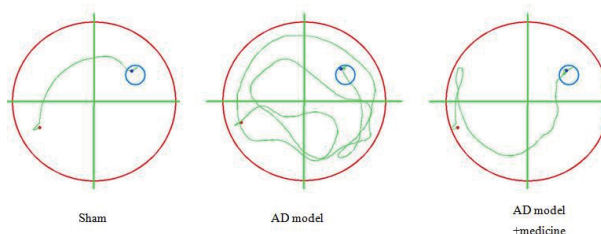
Rat Model for Alzheimer Disease (AD) • DSI707Ra01

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 β 1-40 (10ug (1 μ L)) respectively, retain the needle 5min, then suture wound. 3 days after modeling, caudal vein injection of normal saline, drug given for 100 μ L/day last 21 days, behavior detection of Morris.

Modeling Result



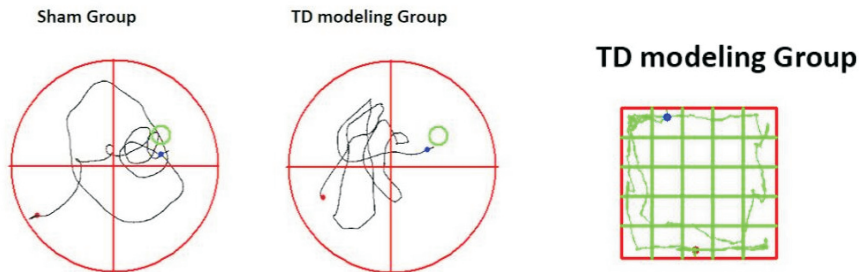
Trajectory chart of Water maze experiment



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

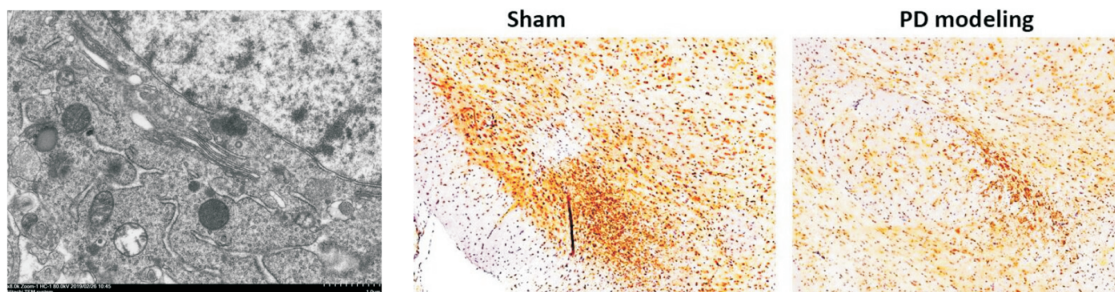


Mouse Model for Parkinson's Disease (PD) • DSI710Mu02

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



(For more informations, please visit:www.cloud-clone.com)

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