



# Elabscience®

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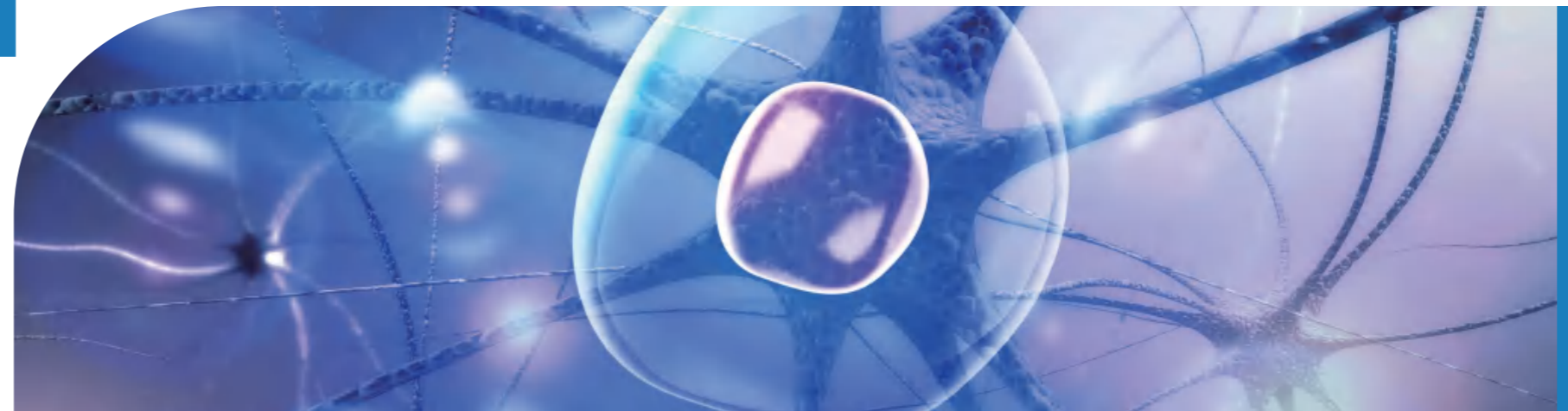
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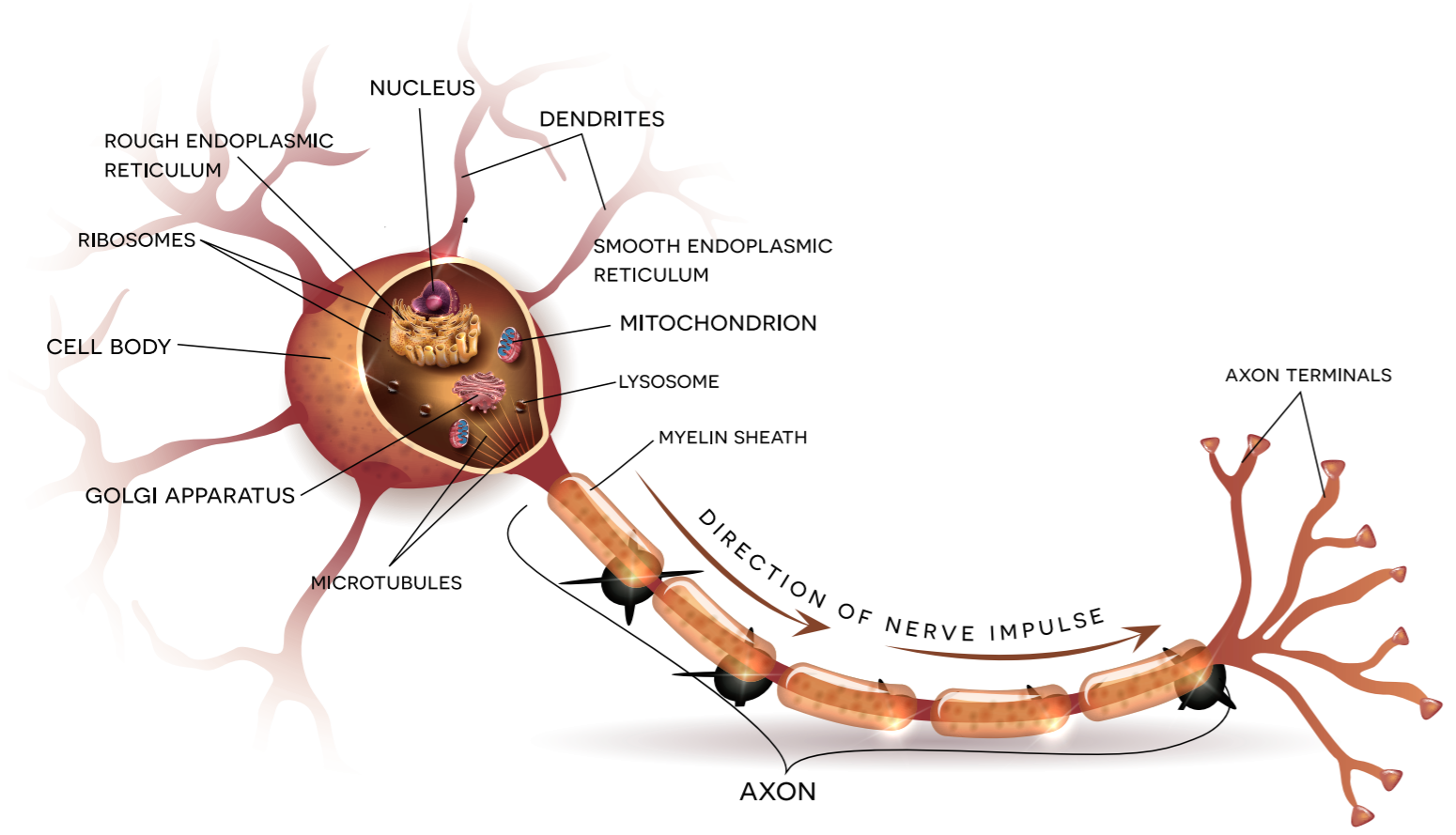
Elabscience®

## ELISA Kits for Neuroscience

Focus on your research Service for life science



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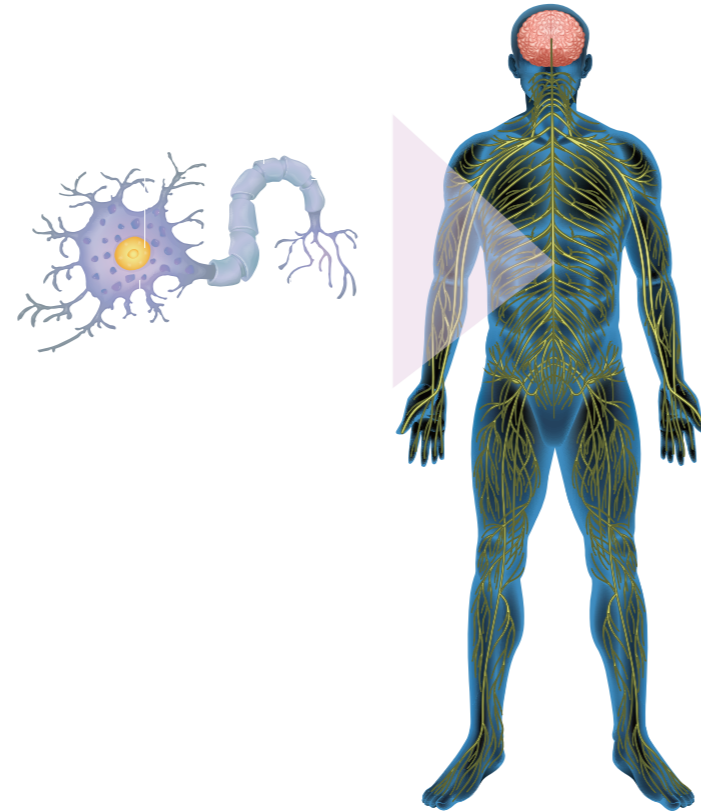
## Neuroscience Introduction

**Neuroscience** (or neurobiology) is the scientific study of the nervous system. Neuroscience encompasses the study of the molecular, structural, cellular, functional, evolutionary, developmental, genetic, physiological, pharmacological, bioinformatics, computational neurobiology and pathology of the nervous system.

Among all vertebrates, the nervous system is the most complex organ system in the body, with most of the complexity residing in the brain. The human brain alone contains around one hundred billion neurons and one hundred trillion synapses. Each neuron might have many thousands of input synaptic connections, each transmitting excitatory or inhibitory signals from the pre-synaptic cell. It is the complex integration of these signals that controls all of the body's functions including learning and memory, motor and sensory functions, and emotions.

Understanding the molecular, cellular and functional processes of the nervous system and their roles in development, aging and disease is an urgent problem for neuroscientists.




Elabscience® provides customers with high-quality ELISA Kits to study multiple aspects of the nervous system, from developmental processes, such as axon guidance and pattern formation to the mechanisms underlying the aging process and neurodegenerative diseases.



## Company Brief Introduction

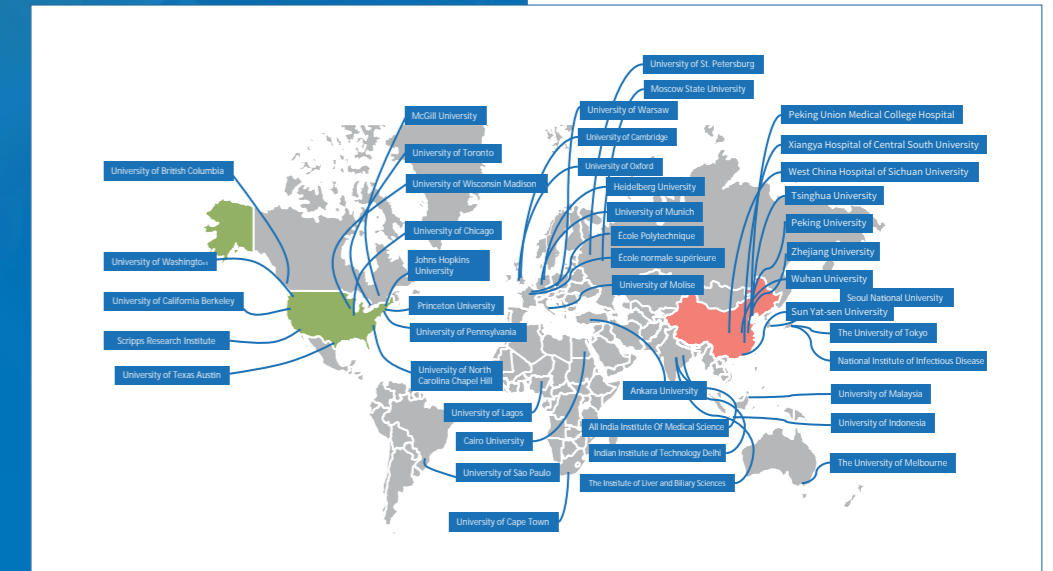
### About Elabscience®

Elabscience® is a high-tech biological company specializing in the development, production and sales of immunoassay reagents. The main products are **ELISA Kits, CLIA Kits, FCM Antibodies, Cell Function Assays, Metabolism Assay Kits, Antibodies, Proteins, Labeling Kits, Immunology Related Reagents**, etc.

-  **45** Invention patents
-  **10000+** SCI articles
-  **84** Utility model patents

### Customer Distribution

The customers are distributed in more than **150 countries** on **5 continents**, basically covering all famous universities and research institutions in the world.



### Why Choose Elabscience® ELISA Kits?



#### Strict Quality Control

- More stringent eight-track quality control standards
- Better performance guarantees
- More professional and timely technical services



#### Recommended by CiteAb

- In 2019, Elabscience® was awarded "Most Recommended and Trusted ELISA Kit Supplier" by CiteAb.



#### Supported by 10000+ SCI Literatures

- Elabscience® products have been cited in more than 10,000 SCI papers, and published in *Nature Medicine*, *Nature*, *Cell*, *Immunity*, *Molecular Cancer* and other internationally renowned journals.

### ELISA Kits Features

- ✓ High precision: Both inter and intra CV are <10%
- ✓ High sensitivity: Pg level
- ✓ Good specificity: Cross-reactivity <10%
- ✓ High precision over thousands of items: Covering various targets and species
- ✓ Flexible choices on size: 48T/96T/96T\*5/96T\*10
- ✓ One-step method available



Fig. ELISA Product Appearance Diagram

## Neuroscience Research

### 01 Blood-Brain Barrier Permeability

The Blood-Brain Barrier (BBB) is composed of a network of vessels that form a structural and chemical barrier between the brain and systemic circulation. It is formed by endothelial cells of the capillary wall, astrocyte end-feet ensheathing the capillary, and pericytes embedded in the capillary basement membrane. This system restricts the passage of pathogens, the diffusion of solutes in the blood, and large or hydrophilic molecules into the cerebrospinal fluid, while allowing the diffusion of hydrophobic molecules (O<sub>2</sub>, CO<sub>2</sub>, hormones) and small polar molecules. Limited permeability restricts movement of substances from the systemic circulation to the brain which buffers the brain from rapid changes in ionic or metabolic conditions. Limited BBB permeability also protects the brain from exposure to molecules that are harmless to peripheral organs but toxic to neurons in the brain. BBB permeability is influenced by neurons, the extracellular matrix, and non-neuronal cells including astrocytes, pericytes, and vascular endothelial cells. These cells, along with the extracellular matrix, function as a neurovascular unit to regulate BBB permeability and maintain the integrity and function of the central nervous system.

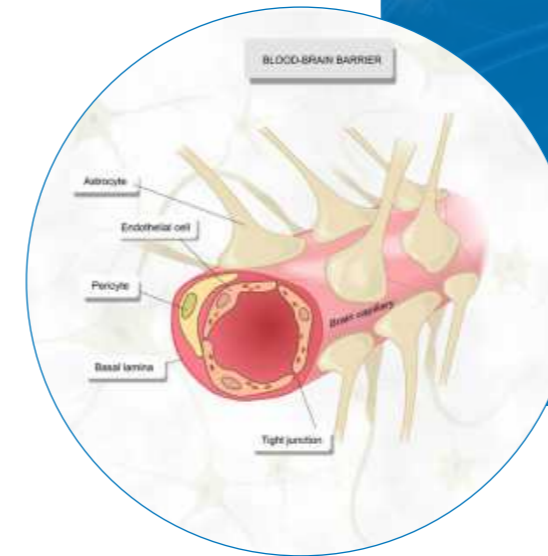


Fig.1 Blood-Brain Barrier Schematic

## Blood-Brain Barrier Permeability

Targets	Cat.No.	Species	Detection Range	Sensitivity
ADAM8(A Disintegrin And Metalloprotease 8)	E-EL-H0264	Human	62.50~4000pg/mL	37.50pg/mL
ADAMTS5(A Disintegrin And Metalloproteinase With Thrombospondin 5)	E-EL-H5590	Human	0.78~50ng/mL	0.47ng/mL
AGER(Total Advanced Glycosylation End Product Specific Receptor)	E-EL-H0295	Human	78.13~5000pg/mL	46.88pg/mL
	E-EL-M3018	Mouse	31.25~2000pg/mL	18.75pg/mL
	E-EL-R0643	Rat	31.25~2000pg/mL	18.75pg/mL
ALCAM(Activated Leukocyte Cell Adhesion Molecule)	E-EL-H6032	Human	31.25~2000pg/mL	18.75pg/mL
Cav-1(Caveolin-1)	E-EL-H0673	Human	0.31~20ng/mL	0.19ng/mL
CK-18/KRT18(Cytokeratin 18)	E-EL-H2072	Human	6.25~400mIU/mL	3.75mIU/mL
	E-EL-R1004	Rat	0.16~10ng/mL	0.10ng/mL
CLDN1(Claudin 1)	E-EL-H0745	Human	0.16~10ng/mL	0.10ng/mL
CLDN3(Claudin 3)	E-EL-H0754	Human	0.31~20ng/mL	0.19ng/mL
CLDN5(Claudin 5)	E-EL-H1630	Human	0.16~10ng/mL	0.10ng/mL
	E-EL-R2502	Rat	0.16~10ng/mL	0.10ng/mL
E-Cad(E-Cadherin)	E-EL-H0014	Human	0.16~10ng/mL	0.10ng/mL
	E-EL-M0211	Mouse	62.50~4000pg/mL	37.50pg/mL
	E-EL-R0347	Rat	0.16~10ng/mL	0.10ng/mL
GAL1(Galectin 1)	E-EL-H1051	Human	0.78~50ng/mL	0.47ng/mL
	E-EL-R3043	Rat	31.25~2000pg/mL	18.75pg/mL

Targets	Cat.No.	Species	Detection Range	Sensitivity
GFAP(Glial Fibrillary Acidic Protein)	E-EL-H6093	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M0554	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R1428	Rat	0.31~20ng/mL	0.19ng/mL
HGF(Hepatocyte Growth Factor)	E-EL-H0084	Human	125~8000pg/mL	75.00pg/mL
	E-EL-M3033	Mouse	31.25~2000pg/mL	18.75pg/mL
	E-EL-R0496	Rat	62.50~4000pg/mL	37.50pg/mL
MAPτ(Microtubule Associated Protein Tau/Tau Protein)	E-EL-H0948	Human	7.81~500pg/mL	4.69pg/mL
	E-EL-M1121	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0943	Rat	31.25~2000pg/mL	18.75pg/mL
MBP(Myelin Basic Protein)	E-EL-H0161	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M0805	Mouse	0.16~10ng/mL	0.10ng/mL
	E-EL-R0642	Rat	0.16~10ng/mL	0.10ng/mL
MMP-1(Matrix Metalloproteinase 1)	E-EL-H6073	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-M0779	Mouse	125~8000pg/mL	75.00pg/mL
	E-EL-R0617	Rat	0.16~10ng/mL	0.10ng/mL
MMP-2(Matrix Metalloproteinase 2)	E-EL-H1445	Human	0.78~50ng/mL	0.47ng/mL
	E-EL-M0780	Mouse	0.16~10ng/mL	0.10ng/mL
	E-EL-R0618	Rat	0.31~20ng/mL	0.19ng/mL
MMP-3(Matrix Metalloproteinase 3)	E-EL-H1446	Human	0.16~10ng/mL	0.10ng/mL
	E-EL-M0626	Mouse	0.16~10ng/mL	0.10ng/mL
	E-EL-R0619	Rat	0.16~10ng/mL	0.10ng/mL

Targets	Cat.No.	Species	Detection Range	Sensitivity
NOS1/nNOS(Nitric Oxide Synthase 1, Neuronal)	E-EL-H0742	Human	0.16~10ng/mL	0.10ng/mL
	E-EL-R1438	Rat	0.16~10ng/mL	0.10ng/mL
NPHN(Nephrin)	E-EL-H1901	Human	0.16~10ng/mL	0.10ng/mL
	E-EL-M2412	Mouse	0.16~10ng/mL	0.10ng/mL
	E-EL-R2406	Rat	0.16~10ng/mL	0.10ng/mL
PECAM1/CD31(Platelet/Endothelial Cell Adhesion Molecule 1)	E-EL-H1640	Human	31.25~2000pg/mL	18.75pg/mL
SDC1(Syndecan 1)	E-EL-H1298	Human	0.16~10ng/mL	0.10ng/mL
	E-EL-M2460	Mouse	0.16~10ng/mL	0.10ng/mL
	E-EL-R0996	Rat	1.56~100ng/mL	0.94ng/mL
TSP-1(Thrombospondin-1)	E-EL-H1589	Human	7.81~500ng/mL	4.69ng/mL
	E-EL-M1137	Mouse	39.06~2500pg/mL	23.44pg/mL
	E-EL-R0964	Rat	0.16~10ng/mL	0.10ng/mL
VCAM-1/CD106(Vascular Cell Adhesion Molecule 1)	E-EL-H5587	Human	1.56~100ng/mL	0.94ng/mL
	E-EL-M1233	Mouse	0.16~10ng/mL	0.10ng/mL
	E-EL-R1061	Rat	12.50~800pg/mL	7.50pg/mL
VE-Cadherin(Vascular Endothelial Cadherin)	E-EL-H6103	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-M0210	Mouse	0.16~10ng/mL	0.10ng/mL
	E-EL-R0130	Rat	0.16~10ng/mL	0.10ng/mL

## 02 Neural Stem Cells

Derived from the ectoderm layer, Neural Stem Cells (NSCs) are the most primordial and uncommitted cells of the nervous system, and are believed to give rise to the vast array of more specialized cells of the CNS and peripheral nervous system (PNS). The characteristics of NSCs: a, Multi-directional differentiation. Neural stem cells can differentiate into neurons, astrocytes, and oligodendrocytes. b, Self-renewal. Neural Stem Cells can divide in symmetrical and asymmetric ways to keep the stem cell pool stable. c, Immunogenic. Neural stem cells are undifferentiated primitive cells that do not express mature cell antigens and are not recognized by the immune system. d, Tissue fusion. Can fuse well with the host's nervous tissue and survive in the host for a long time.

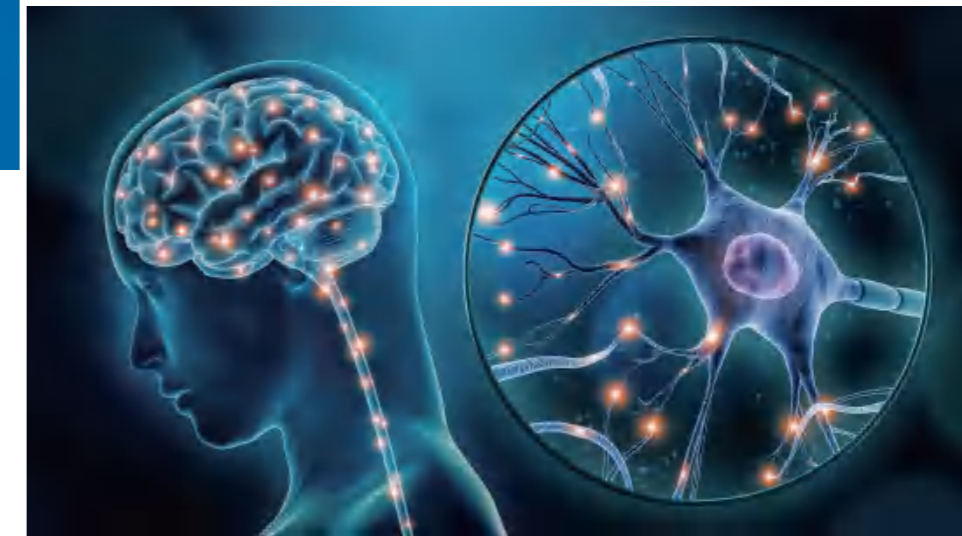


Fig.2 Neural Stem Cells Schematic

## Neural Stem Cells

Targets	Cat.No.	Species	Detection Range	Sensitivity
AChE(Acetylcholinesterase)	E-EL-H6031	Human	15.63~1000IU/mL	9.38IU/mL
	E-EL-R0355	Rat	0.78~50ng/mL	0.47ng/mL
ACV-A(Activin A)	E-EL-H0003	Human	78.13~5000pg/mL	46.88pg/mL
	E-EL-M0001	Mouse	78.13~5000pg/mL	46.88pg/mL
	E-EL-R0001	Rat	78.13~5000pg/mL	46.88pg/mL
AFGF/FGF1(Acidic Fibroblast Growth Factor 1)	E-EL-H0071	Human	31.25~2000pg/mL	18.75pg/mL
ApoE(Apolipoprotein E)	E-EL-H0470	Human	23.44~1500ng/mL	14.06ng/mL
	E-EL-M0135	Mouse	1.56~100ng/mL	0.94ng/mL
	E-EL-R1230	Rat	3.13~200ng/mL	1.88ng/mL
Aβ1-40(Amyloid Beta 1-40)	E-EL-H0542	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M3009	Mouse	7.81~500pg/mL	4.69pg/mL
	E-EL-R3030	Rat	15.63~1000pg/mL	9.38pg/mL
Aβ1-42(Amyloid Beta 1-42)	E-EL-H0543	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M3010	Mouse	3.13~200pg/mL	1.88pg/mL
	E-EL-R1402	Rat	15.63~1000pg/mL	9.38pg/mL
BDNF(Brain Derived Neurotrophic Factor)	E-EL-H0010	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-M0203	Mouse	31.25~2000pg/mL	18.75pg/mL
	E-EL-R1235	Rat	31.25~2000pg/mL	18.75pg/mL

Targets	Cat.No.	Species	Detection Range	Sensitivity
bFGF/FGF2(Basic Fibroblast Growth Factor)	E-EL-H6042	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-M0170	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0091	Rat	15.63~1000pg/mL	9.38pg/mL
CXCR4(Chemokine C-X-C-Motif Receptor 4)	E-EL-H5490	Human	78.13~5000pg/mL	46.88pg/mL
FGF21(Fibroblast Growth Factor 21)	E-EL-H0074	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-M0029	Mouse	31.25~2000pg/mL	18.75pg/mL
FGF23(Fibroblast Growth Factor 23)	E-EL-H1116	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M2415	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R3031	Rat	62.50~4000pg/mL	37.50pg/mL
GAL3(Galectin 3)	E-EL-H1470	Human	0.16~10ng/mL	0.10ng/mL
	E-EL-M0529	Mouse	31.25~2000pg/mL	18.75pg/mL
	E-EL-R0399	Rat	31.25~2000pg/mL	18.75pg/mL
GFAP(Glial Fibrillary Acidic Protein)	E-EL-H6093	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M0554	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R1428	Rat	0.31~20ng/mL	0.19ng/mL
IGF-1(Insulin-Like Growth Factor 1)	E-EL-H0086	Human	1.56~100ng/mL	0.94ng/mL
	E-EL-M3006	Mouse	15.63~1000ng/mL	9.38ng/mL
	E-EL-R3001	Rat	3.13~200ng/mL	1.88ng/mL
IL-1β(Interleukin 1 Beta)	E-EL-H0149	Human	7.81~500pg/mL	4.69pg/mL
	E-EL-M0037	Mouse	7.81~500pg/mL	4.69pg/mL
	E-EL-R0012	Rat	31.25~2000pg/mL	18.75pg/mL
IL-6(Interleukin 6)	E-EL-H6156	Human	1.56~100pg/mL	0.94pg/mL
	E-EL-M0044	Mouse	31.25~2000pg/mL	18.75pg/mL
	E-EL-R0015	Rat	12.50~800pg/mL	7.50pg/mL

Targets	Cat.No.	Species	Detection Range	Sensitivity
INHBI(Inhibin B)	E-EL-H0313	Human	7.81~500pg/mL	4.69pg/mL
	E-EL-R1027	Rat	15.63~1000pg/mL	9.38pg/mL
MAPτ(Microtubule Associated Protein Tau/Tau Protein)	E-EL-H0948	Human	7.81~500pg/mL	4.69pg/mL
	E-EL-M1121	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0943	Rat	31.25~2000pg/mL	18.75pg/mL
NFE2L2(Nuclear Factor, Erythroid Derived 2, Like 2)	E-EL-H1564	Human	0.16~10ng/mL	0.10ng/mL
	E-EL-M2607	Mouse	0.31~20ng/mL	0.19ng/mL
	E-EL-R1052	Rat	15.63~1000pg/mL	9.38pg/mL
PGF(Placental Growth Factor)	E-EL-H1555	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0742	Rat	7.81~500pg/mL	4.69pg/mL
S100B(S100 Calcium Binding Protein B)	E-EL-H1297	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-M1033	Mouse	78.13~5000pg/mL	46.88pg/mL
	E-EL-R0868	Rat	62.50~4000pg/mL	37.50pg/mL
SNCA(Synuclein Alpha)	E-EL-H0983	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M1109	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R1217	Rat	15.63~1000pg/mL	9.38pg/mL
SYP(Synaptophysin)	E-EL-M1105	Mouse	0.63~40ng/mL	0.38ng/mL
	E-EL-R0932	Rat	0.63~40ng/mL	0.38ng/mL
TGF-β1(Transforming Growth Factor Beta 1)	E-EL-0162	Universal	0.16~10ng/mL	0.09ng/mL
VEGF-A(Vascular Endothelial Cell Growth Factor A)	E-EL-H0111	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-M1292	Mouse	31.25~2000pg/mL	18.75pg/mL
	E-EL-R2603	Rat	31.25~2000pg/mL	18.75pg/mL

### 03 Neurodegenerative Disease

Neurodegenerative disease is a heterogeneous group of disorders that are characterized by the progressive degeneration of the structure and function of the central nervous system or peripheral nervous system. Common neurodegenerative diseases include Alzheimer's disease(AD), Parkinson's disease(PD), Myasthenia gravis(MG) and psychiatric disorders including depression and anxiety-related disorders. Understanding the pathogenesis of neurodegenerative diseases is essential for their prevention and treatment. Elabscience® provides researchers with a range of ELISA targets to study the biological processes that accompany neurodegenerative diseases.

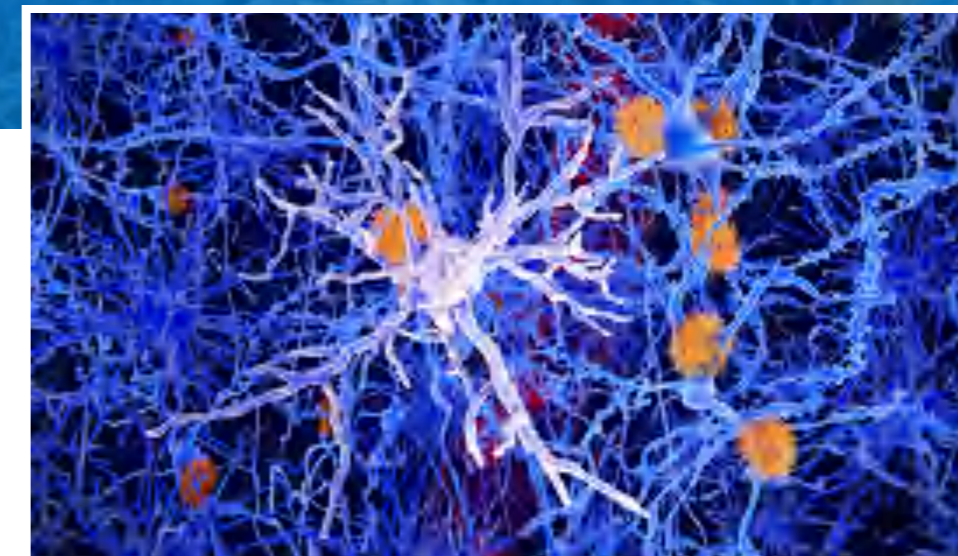


Fig.3 A Network of Neurons with Amyloid Plaques(AD)



## Neurodegenerative Disease

Targets	Cat.No.	Species	Detection Range	Sensitivity
AFGF/FGF1(Acidic Fibroblast Growth Factor 1)	E-EL-H0071	Human	31.25~2000pg/mL	18.75pg/mL
ApoE(Apolipoprotein E)	E-EL-H0470	Human	23.44~1500ng/mL	14.06ng/mL
	E-EL-M0135	Mouse	1.56~100ng/mL	0.94ng/mL
	E-EL-R1230	Rat	3.13~200ng/mL	1.88ng/mL
bFGF/FGF2(Basic Fibroblast Growth Factor)	E-EL-H6042	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-M0170	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0091	Rat	15.63~1000pg/mL	9.38pg/mL
GDNF(Glial Cell Line Derived Neurotrophic Factor)	E-EL-H1495	Human	0.31~20ng/mL	0.19ng/mL
	E-EL-M3028	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0420	Rat	78.13~5000pg/mL	46.88pg/mL
HSP-27/HSPB1(Heat Shock Protein 27)	E-EL-H1860	Human	0.78~50ng/mL	0.47ng/mL
IGF-1(Insulin-like Growth Factor 1)	E-EL-H0086	Human	1.56~100ng/mL	0.94ng/mL
	E-EL-M3006	Mouse	15.63~1000ng/mL	9.38ng/mL
	E-EL-R3001	Rat	3.13~200ng/mL	1.88ng/mL
IGF1R(Insulin Like Growth Factor 1 Receptor)	E-EL-H0425	Human	0.31~20ng/mL	0.19ng/mL
IL-6(Interleukin 6)	E-EL-H6156	Human	1.56~100pg/mL	0.94pg/mL
	E-EL-M0044	Mouse	31.25~2000pg/mL	18.75pg/mL
	E-EL-R0015	Rat	12.50~800pg/mL	7.50pg/mL
IL-6R(Interleukin 6 Receptor)	E-EL-H0192	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-R0896	Rat	78.13~5000pg/mL	46.88pg/mL

Targets	Cat.No.	Species	Detection Range	Sensitivity
IL-34(Interleukin 34)	E-EL-H1650	Human	93.75~6000pg/mL	56.25pg/mL
	E-EL-R2423	Rat	31.25~2000pg/mL	18.75pg/mL
KL(Klotho)	E-EL-H5451	Human	0.31~20ng/mL	0.19ng/mL
	E-EL-R2580	Rat	0.16~10ng/mL	0.10ng/mL
MAPτ(Microtubule Associated Protein Tau/Tau Protein)	E-EL-H0948	Human	7.81~500pg/mL	4.69pg/mL
	E-EL-M1121	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0943	Rat	31.25~2000pg/mL	18.75pg/mL
NEFL(Neurofilament, Light Polypeptide)	E-EL-H0741	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-R2536	Rat	15.63~1000pg/mL	9.38pg/mL
NRG-1(Neuregulin 1)	E-EL-H6092	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M0107	Mouse	78.13~5000pg/mL	46.88pg/mL
NT-3(Neurotrophin 3)	E-EL-H1896	Human	78.13~5000pg/mL	46.88pg/mL
	E-EL-M2438	Mouse	31.25~2000pg/mL	18.75pg/mL
SIRT1(Sirtuin 1)	E-EL-H1546	Human	0.31~20ng/mL	0.19ng/mL
	E-EL-M0350	Mouse	0.16~10ng/mL	0.10ng/mL
	E-EL-R1102	Rat	0.16~10ng/mL	0.10ng/mL
SNCA(Synuclein Alpha)	E-EL-H0983	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M1109	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R1217	Rat	15.63~1000pg/mL	9.38pg/mL
tPA(Tissue-type Plasminogen Activator)	E-EL-H2106	Human	0.63~40ng/mL	0.38ng/mL
	E-EL-M0917	Mouse	39.06~2500pg/mL	23.44pg/mL
Ub(Ubiquitin)	E-EL-H1252	Human	62.50~4000pg/mL	37.50pg/mL
UCHL1(Ubiquitin Carboxyl Terminal Hydrolase L1)	E-EL-H2377	Human	78.13~5000pg/mL	46.88pg/mL
	E-EL-M2615	Mouse	62.50~4000pg/mL	37.50pg/mL
	E-EL-R2478	Rat	62.50~4000pg/mL	37.50pg/mL

04 Neuroinflammation

Neuron

Neuroinflammation, defined as an inflammatory reaction within nervous tissue, arises as a mechanism to protect the brain and spinal cord against potential harm from a variety of toxic stimuli including protein aggregates, neuronal injury, and infection. Neuroinflammation is a complex biological response involving many signaling proteins, receptors, and cell types. Neuroinflammation stems from a combination of responses from resident neuroglia cells in the central nervous system (CNS), which include microglia, oligodendrocytes, astrocytes, and non-glial resident myeloid cells (macrophages and dendritic cells) and peripheral leukocytes. In recent years, research has shown that a sustained inflammatory response can contribute to the development and progression of many neurodegenerative diseases and neurological disorders.

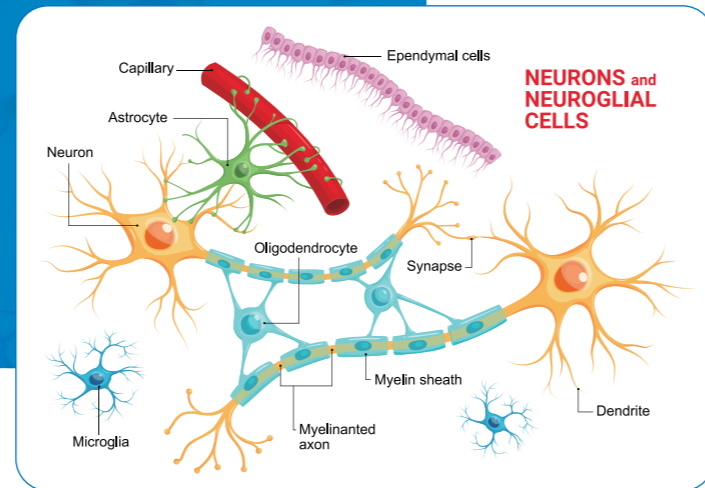


Fig.4 Neuroinflammatory Responses Involve Neuroglia Cell

## Neuroinflammation

Targets	Cat.No.	Species	Detection Range	Sensitivity
CXCR2(CXC-Chemokine Receptor 2)	E-EL-H2578	Human	0.78~50ng/mL	0.47ng/mL
CXCR3(CXC-Chemokine Receptor 3)	E-EL-H0854	Human	0.16~10ng/mL	0.10ng/mL
GFAP(Glial Fibrillary Acidic Protein)	E-EL-H6093	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M0554	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R1428	Rat	0.31~20ng/mL	0.19ng/mL
GROβ/CXCL2(Growth Regulated Oncogene Beta)	E-EL-H1904	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M0019	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0696	Rat	31.25~2000pg/mL	18.75pg/mL
ICAM-1/CD54(intercellular adhesion molecule 1)	E-EL-H6114	Human	0.31~20ng/mL	0.19ng/mL
	E-EL-M3037	Mouse	1.37~1000ng/mL	0.82ng/mL
	E-EL-R2850	Rat	0.31~20ng/mL	0.19ng/mL
IFN-γ(Interferon Gamma)	E-EL-H0108	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M0048	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0009	Rat	31.25~2000pg/mL	18.75pg/mL
IL-8(Interleukin 8)	E-EL-H6008	Human	7.81~500pg/mL	4.69pg/mL
IL-17A(Interleukin 17A)	E-EL-H0105	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-M0047	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0566	Rat	15.63~1000pg/mL	9.38pg/mL
IP-10/CXCL10(Interferon Gamma Induced Protein 10kDa)	E-EL-H0050	Human	7.81~500pg/mL	4.69pg/mL
	E-EL-M0021	Mouse	31.25~2000pg/mL	18.75pg/mL
	E-EL-R0546	Rat	31.25~2000pg/mL	18.75pg/mL

Targets	Cat.No.	Species	Detection Range	Sensitivity
MCP-1(Monocyte Chemotactic Protein 1)	E-EL-H6005	Human	62.50~4000pg/mL	37.50pg/mL
	E-EL-M3001	Mouse	31.25~2000pg/mL	18.75pg/mL
	E-EL-R0633	Rat	0.16~10ng/mL	0.10ng/mL
MIP-1α(Macrophage Inflammatory Protein 1 Alpha)	E-EL-H0021	Human	23.44~1500pg/mL	14.06pg/mL
	E-EL-M0007	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0602	Rat	31.25~2000pg/mL	18.75pg/mL
PTGS2/COX-2(Prostaglandin Endoperoxide Synthase 2)	E-EL-H1846	Human	0.31~20ng/mL	0.19ng/mL
	E-EL-M0959	Mouse	0.16~10ng/mL	0.10ng/mL
	E-EL-R0792	Rat	125~8000pg/mL	75.00pg/mL
RANTES(Regulated On Activation, Normal T-Cell Expressed and Secreted)	E-EL-H6006	Human	0.31~20ng/mL	0.19ng/mL
	E-EL-M0009	Mouse	31.25~2000pg/mL	18.75pg/mL
	E-EL-R0845	Rat	15.63~1000pg/mL	9.38pg/mL
SDF-1/CXCL12(Stromal Cell Derived Factor 1)	E-EL-H0052	Human	0.16~10ng/mL	0.10ng/mL
	E-EL-M3046	Mouse	78.13~5000pg/mL	46.88pg/mL
	E-EL-R3027	Rat	0.31~20ng/mL	0.19ng/mL
SLC(Secondary Lymphoid Tissue Chemokine)	E-EL-H0028	Human	78.13~5000pg/mL	46.88pg/mL
	E-EL-M0145	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0627	Rat	62.50~4000pg/mL	37.50pg/mL
TGF-β1(Transforming Growth Factor Beta 1)	E-EL-0162	Universal	0.16~10ng/mL	0.09ng/mL
TLR-2(Toll-like Receptor 2)	E-EL-H0951	Human	0.31~20ng/mL	0.19ng/mL
	E-EL-R0907	Rat	0.31~20ng/mL	0.19ng/mL
TLR4(Toll-Like Receptor 4)	E-EL-H6123	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-M2417	Mouse	0.16~10ng/mL	0.10ng/mL
	E-EL-R0990	Rat	0.31~20ng/mL	0.19ng/mL
TNF-α(Tumor Necrosis Factor Alpha)	E-EL-H0109	Human	7.81~500pg/mL	4.69pg/mL
	E-EL-M3063	Mouse	7.81~500pg/mL	4.69pg/mL
	E-EL-R2856	Rat	15.63~1000pg/mL	9.38pg/mL

## 05 Neurotransmitter Associated Enzymes

Neurotransmitters are chemicals released across the synapse to facilitate signal transduction from the pre-synaptic neuron to the postsynaptic target cell. The target cells can be a different neuron, muscle cell, or gland cell. Neurotransmitters are essential to the function of complex neural systems. Synaptic failure and neurotransmitter dysfunction are known to underlie many neurodegenerative diseases, including Alzheimer's disease, Parkinson's disease, and Amyotrophic Lateral Sclerosis (ALS).

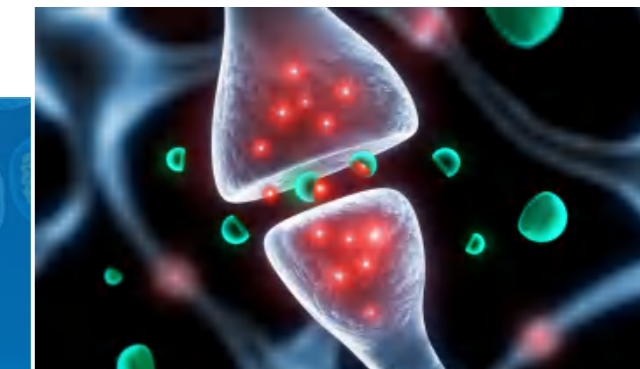


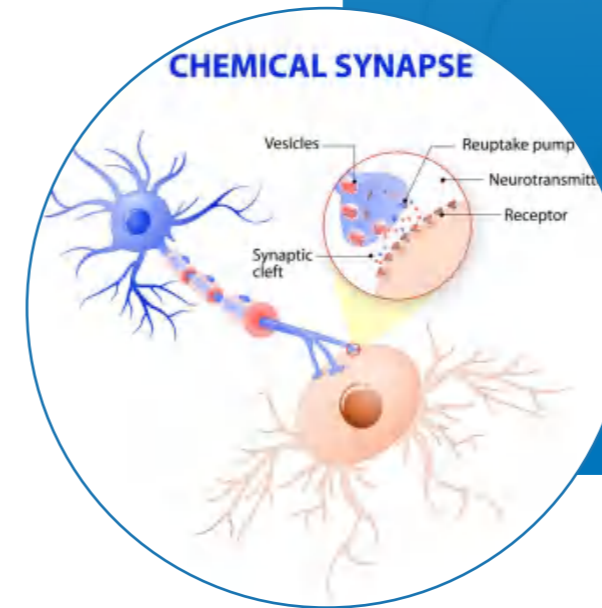
Fig.5 Synaptic Vesicles Containing Neurotransmitters

## Neurotransmitter Associated Enzymes

Targets	Cat.No.	Species	Detection Range	Sensitivity
AChE(Acetylcholinesterase)	E-EL-H6031	Human	15.63~1000IU/mL	9.38IU/mL
	E-EL-R0355	Rat	0.78~50ng/mL	0.47ng/mL
Cortisol	E-EL-0157	Human	6.25~400ng/mL	2.92ng/mL
	E-EL-0159	Porcine	0.78~50ng/mL	0.48ng/mL
	E-EL-0158	Bovine/Sheep	1.56~100ng/mL	0.96ng/mL

Targets	Cat.No.	Species	Detection Range	Sensitivity
ET-1(Endothelin 1)	E-EL-H0064	Human	1.25~80pg/mL	0.75pg/mL
	E-EL-M2730	Mouse	0.78~50pg/mL	0.47pg/mL
	E-EL-R1458	Rat	0.78~50pg/mL	0.47pg/mL
GAD2(Glutamate Decarboxylase 2)	E-EL-H6069	Human	78.13~5000pg/mL	46.88pg/mL
GAL(Galanin)	E-EL-H1301	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0396	Rat	15.63~1000pg/mL	9.38pg/mL
GH(Growth Hormone)	E-EL-H0177	Human	78.13~5000pg/mL	46.88pg/mL
	E-EL-M0060	Mouse	0.31~20ng/mL	0.19ng/mL
	E-EL-R3003	Rat	1.56~100ng/mL	0.94ng/mL
LEP(Leptin)	E-EL-H6017	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M3008	Mouse	0.31~20ng/mL	0.19ng/mL
	E-EL-R0582	Rat	0.16~10ng/mL	0.10ng/mL
5-LO(Arachidonate 5-Lipoxygenase)	E-EL-M1278	Mouse	0.16~10ng/mL	0.10ng/mL
	E-EL-R0999	Rat	0.16~10ng/mL	0.10ng/mL
NPY(Neuropeptide Y)	E-EL-H1893	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-M0820	Mouse	31.25~2000pg/mL	18.75pg/mL
	E-EL-R0655	Rat	31.25~2000pg/mL	18.75pg/mL
PSMA(Prostate specific membrane antigen)	E-EL-H5413	Human	4.69~300ng/mL	2.81ng/mL
PYY(Peptide YY)	E-EL-H1237	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-M2375	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0720	Rat	15.63~1000pg/mL	9.38pg/mL
SP(Substance P)	E-EL-0067	Universal	78.125~5000pg/mL	46.88pg/mL

## 06 Neurotransmitter Receptors, Transporters and Ion Channels



Neurotransmitter receptors are expressed on the surface of post-synaptic cells to bind ligand-specific neurotransmitters and hormones. They are also expressed on presynaptic cells to provide feedback mechanisms and attenuate excessive neurotransmitter release. There are two major types of neurotransmitter receptors: ionotropic and metabotropic. Ionotropic means that ions can pass through the receptor, whereas metabotropic means that a second messenger inside the cell relays the message (i.e. metabotropic receptors do not have channels). Metabotropic receptors are in fact G protein-coupled receptors. The majority of neurotransmitter receptors are integral membrane proteins with seven transmembrane domains, commonly coupled to G-proteins. Binding of a ligand to its specific neurotransmitter receptor may result in the activation of a myriad of cell signal transduction pathways and modulation of ion channel homeostasis.

Fig.6 Neurotransmitter Receptors, Transporters and Ion Channels Schematic

## Neurotransmitter Receptors, Transporters and Ion Channels

Targets	Cat.No.	Species	Detection Range	Sensitivity
AIF1(Allograft Inflammatory Factor 1)	E-EL-H0302	Human	31.25~2000pg/mL	18.75pg/mL
ANXA1(Annexin A1)	E-EL-H5512	Human	0.31~20ng/mL	0.19ng/mL
ANXA2(Annexin A2)	E-EL-H0448	Human	0.63~40ng/mL	0.38ng/mL
CFTR(Cystic Fibrosis Transmembrane Conductance Regulator)	E-EL-H1766	Human	0.16~10ng/mL	0.10ng/mL
CRT(Calreticulin)	E-EL-H0627	Human	0.16~10ng/mL	0.10ng/mL
	E-EL-M0224	Mouse	0.16~10ng/mL	0.10ng/mL
S100A7(S100 Calcium Binding Protein A7)	E-EL-H1296	Human	0.16~10ng/mL	0.10ng/mL
S100A8(S100 Calcium Binding Protein A8)	E-EL-H1289	Human	0.63~40ng/mL	0.38ng/mL
	E-EL-M3048	Mouse	62.50~4000pg/mL	37.50pg/mL
S100A9(S100 Calcium Binding Protein A9)	E-EL-H1290	Human	0.78~50ng/mL	0.47ng/mL
	E-EL-M3049	Mouse	0.63~40ng/mL	0.38ng/mL
S100A11(S100 Calcium Binding Protein A11)	E-EL-H1292	Human	0.31~20ng/mL	0.19ng/mL
	E-EL-H1293	Human	0.16~10ng/mL	0.10ng/mL
S100B(S100 Calcium Binding Protein B)	E-EL-H1297	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-M1033	Mouse	78.13~5000pg/mL	46.88pg/mL
	E-EL-R0868	Rat	62.50~4000pg/mL	37.50pg/mL

## 07 Neurotrophic Factors and Receptors

Neurotrophic factors (NTFs) are a family of biomolecules, nearly all of which are peptides or small molecular proteins that support the growth, survival, and differentiation of both developing and mature neurons. Neurotrophic factors usually enters the nerve endings through receptor-mediated entry into the cell, and then reaches the cell body via reverse axonal transport to promote the synthesis of related proteins in the cell body, so as to play its role in supporting the growth, development and functional integrity of neurons. They also have putative roles in regeneration following nervous system injury, with potential to treat neurodegenerative diseases.

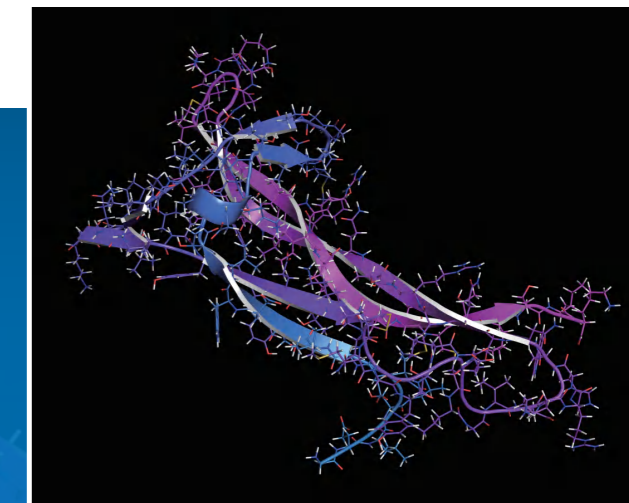


Fig.7 Brain-Derived Neurotrophic Factor(BDNF) Protein Molecule

## Neurotrophic Factors and Receptors

Targets	Cat.No.	Species	Detection Range	Sensitivity
APP(Amyloid Precursor Protein)	E-EL-R2490	Rat	1.56~100ng/mL	0.94ng/mL
BDNF(Brain Derived Neurotrophic Factor)	E-EL-H0010	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-M0203	Mouse	31.25~2000pg/mL	18.75pg/mL
	E-EL-R1235	Rat	31.25~2000pg/mL	18.75pg/mL

Targets	Cat.No.	Species	Detection Range	Sensitivity
CNTF(Ciliary Neurotrophic Factor)	E-EL-H0039	Human	31.25~2000pg/mL	18.75pg/mL
	E-EL-R0207	Rat	39.06~2500pg/mL	23.44pg/mL
GDNF(Glial Cell Line Derived Neurotrophic Factor)	E-EL-H1495	Human	0.31~20ng/mL	0.19ng/mL
	E-EL-M3028	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0420	Rat	78.13~5000pg/mL	46.88pg/mL
gp130(Glycoprotein 130)	E-EL-H6015	Human	78.13~5000pg/mL	46.88pg/mL
IL-6(Interleukin 6)	E-EL-H6156	Human	1.56~100pg/mL	0.94pg/mL
	E-EL-M0044	Mouse	31.25~2000pg/mL	18.75pg/mL
	E-EL-R0015	Rat	12.50~800pg/mL	7.50pg/mL
IRS1(Insulin Receptor Substrate 1)	E-EL-H5554	Human	0.16~10ng/mL	0.10ng/mL
	E-EL-R1111	Rat	0.31~20ng/mL	0.19ng/mL
LIF(Leukemia Inhibitory Factor)	E-EL-M0040	Mouse	15.63~1000pg/mL	9.38pg/mL
NCAM/CD56(Neural Cell Adhesion Molecule)	E-EL-H1894	Human	1.56~100ng/mL	0.94ng/mL
NGF(Nerve Growth Factor)	E-EL-H1205	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M0815	Mouse	31.25~2000pg/mL	18.75pg/mL
	E-EL-R0652	Rat	39.06~2500pg/mL	23.44pg/mL
NT-4(Neurotrophin 4)	E-EL-H6094	Human	31.25~2000pg/mL	18.75pg/mL
NTRK2(Neurotrophic Tyrosine Kinase Receptor Type 2)	E-EL-R0656	Rat	93.75~6000pg/mL	56.25pg/mL
pERK1/2(Phospho Extracellular Signal Regulated Kinase 1/2)	E-EL-H1698	Human	31.25~2000pg/mL	18.75pg/mL
PGRN(Progranulin)	E-EL-H1578	Human	62.50~4000pg/mL	37.50pg/mL
SORT1(Sortilin)	E-EL-H5414	Human	0.16~10ng/mL	0.10ng/mL

## 08 Synaptic Proteins and Receptors

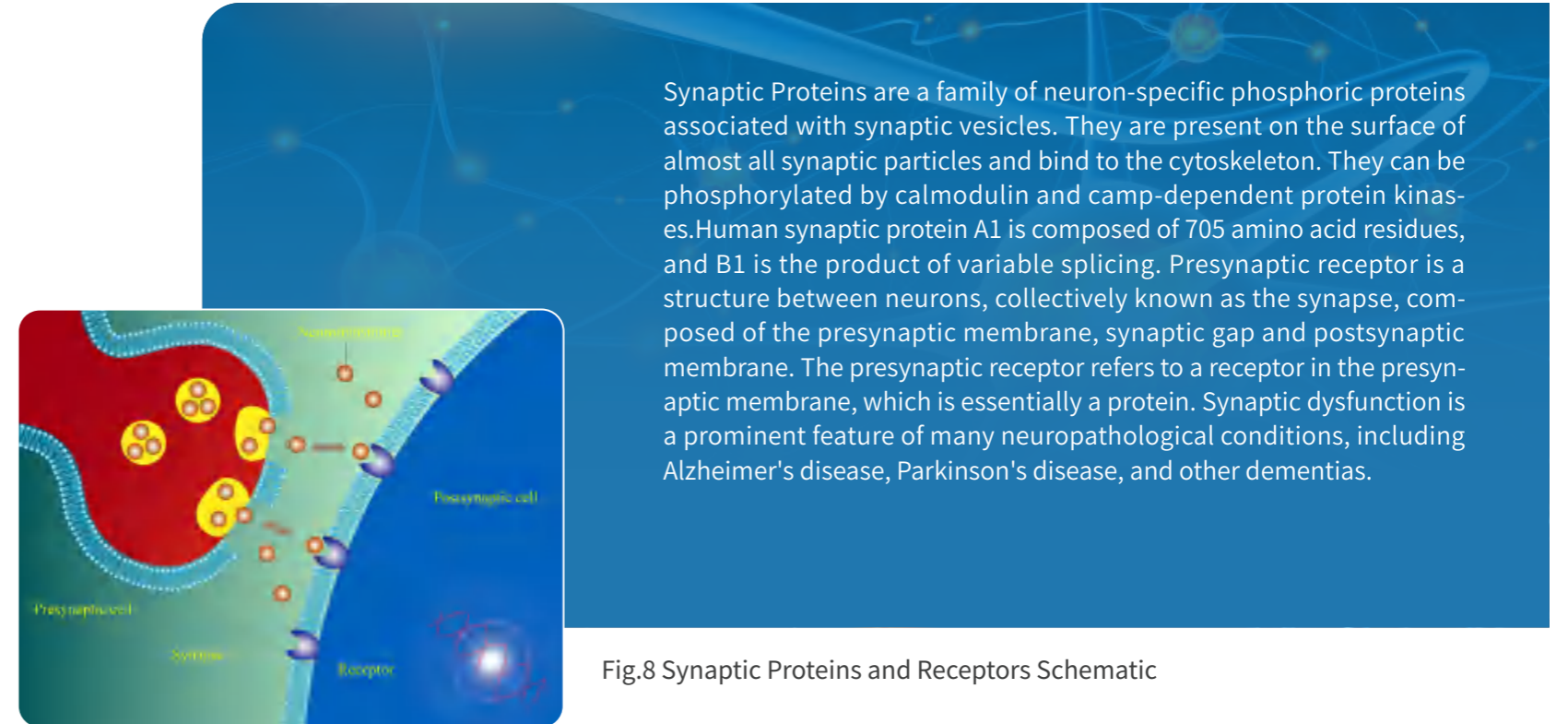


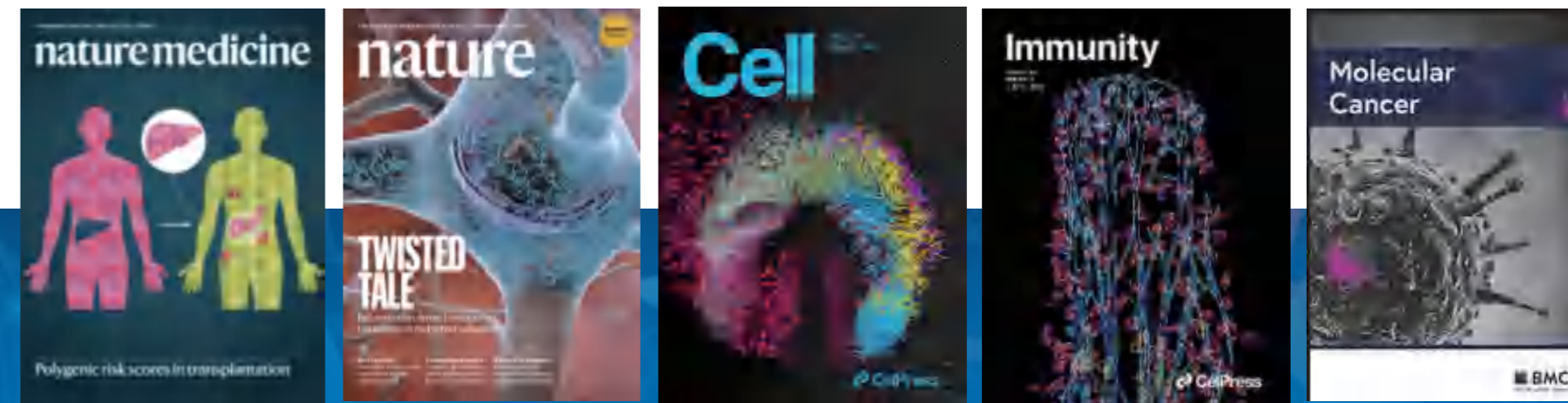
Fig.8 Synaptic Proteins and Receptors Schematic

## Synaptic Proteins and Receptors

Targets	Cat.No.	Species	Detection Range	Sensitivity
CALD(Caldesmon)	E-EL-H0623	Human	0.31~20ng/mL	0.19ng/mL
CHGA(Chromogranin A)	E-EL-H0739	Human	62.50~4000pg/mL	37.50pg/mL
CHGB(Chromogranin B)	E-EL-H0832	Human	62.50~4000pg/mL	37.50pg/mL
CRT(Calreticulin)	E-EL-H0627	Human	0.16~10ng/mL	0.10ng/mL
	E-EL-M0224	Mouse	0.16~10ng/mL	0.10ng/mL
MAPτ(Microtubule Associated Protein Tau/Tau Protein)	E-EL-H0948	Human	7.81~500pg/mL	4.69pg/mL
	E-EL-M1121	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R0943	Rat	31.25~2000pg/mL	18.75pg/mL
NCAM/CD56(Neural Cell Adhesion Molecule)	E-EL-H1894	Human	1.56~100ng/mL	0.94ng/mL
NPHN(Nephrin)	E-EL-H1901	Human	0.16~10ng/mL	0.10ng/mL
	E-EL-M2412	Mouse	0.16~10ng/mL	0.10ng/mL
	E-EL-R2406	Rat	0.16~10ng/mL	0.10ng/mL
PDPN(Podoplanin)	E-EL-H1810	Human	0.16~10ng/mL	0.10ng/mL
	E-EL-M2409	Mouse	0.16~10ng/mL	0.10ng/mL
pMAPT/pTAU(phosphorylated microtubule-associated protein tau)	E-EL-R1090	Rat	15.63~1000pg/mL	9.38pg/mL
SNCA(Synuclein Alpha)	E-EL-H0983	Human	15.63~1000pg/mL	9.38pg/mL
	E-EL-M1109	Mouse	15.63~1000pg/mL	9.38pg/mL
	E-EL-R1217	Rat	15.63~1000pg/mL	9.38pg/mL

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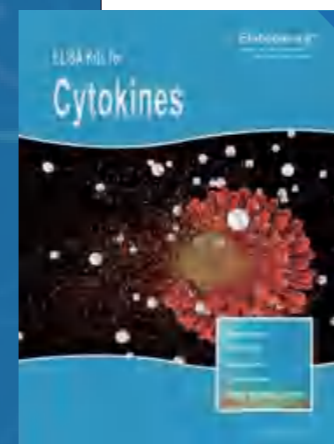
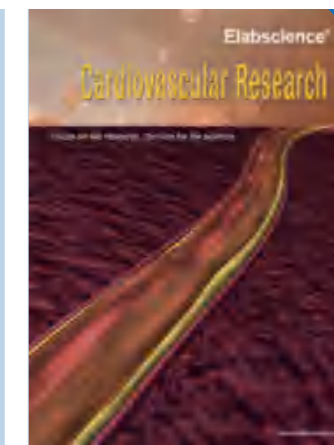
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## Part of High IF Literatures—Neuroscience Research Area

Target	Cat.No.	Literature Information	Research Area	Impact Factor
EPI CORT NA/NE Mouse GC Mouse GH Mouse GHRL	E-EL-0045 E-EL-0161 E-EL-0047 E-EL-M0555 E-EL-M0060 E-EL-M0551	Meng J J, Shen J W, Li G, et al. Light Modulates Glucose Metabolism by a Retina-Hypothalamus-Brown Adipose Tissue Axis[J]. Cell, 2023, 186(2): 398-412.	Neuroscience Metabolism	66.85
Rat ApoE	E-EL-R1230	Guttenplan, K.A., Weigel, M.K., Prakash, P., et al. Neurotoxic Reactive Astrocytes Induce Cell Death via Saturated Lipids[J]. Nature, 2021, 599(7883): 102-107.	Neuroscience Signaling Transduction	49.962
Mouse ADH	E-EL-M0106	Bi Q Q, Wang C, Cheng G, et al. Microglia-Derived PDGFB Promotes Neuronal Potassium Currents to Suppress Basal Sympathetic Tonicity and Limit Hypertension[J]. Immunity, 2022, 55(8-9): 1334-1336.	Neuroscience Signaling Transduction Cardiovascular	43.474
Rat CGRP1	E-EL-R0135	Zhang Y, Xu J, Ye C R, et al. Implant-Derived Magnesium Induces Local Neuronal Production of CGRP to Improve Bone-Fracture Healing in Rats[J]. Nature Medicine, 2016, 22(10): 1160-1169.	Neuroscience Stem Cells	36.130
Human NGF Human CGRP-1 Mouse CGRP1 Rat CGRP1	E-EL-H1205 E-EL-H0619 E-EL-M0215 E-EL-R0135	Zhang Y, Lin C Z, Liu Z Q, et al. Cancer Cells Co-opt Nociceptive Nerves to Thrive in Nutrient-Poor Environments and upon Nutrient-Starvation Therapies[J]. Cell Metabolism, 2022, 34(12): 1999-2017.	Neuroscience Cancer Signaling Transduction	31.373
Human Aβ1-40 Human Aβ1-42	E-EL-H0542 E-EL-H0543	Zheng J, Li H L, Tian N, et al. Interneuron Accumulation of Phosphorylated Tau Impairs Adult Hippocampal Neurogenesis by Suppressing GABAergic Transmission[J]. Cell Stem Cell, 2020, 26(3): 331-345.	Neuroscience	20.86
Human NEFL Human NSE	E-EL-H0741 E-EL-H1047	Sahin B E, Celikbilek A, Kocak Y, et al. Neurological Symptoms and Neuronal Damage Markers in Acute COVID-19: Is There a Correlation? A Pilot Study[J]. Journal of Medical Virology, 2023, 95(1).	Neuroscience	20.69
Mouse IL-1β Mouse IL-6 Mouse TNF-α	E-EL-M0037 E-EL-M0044 E-EL-M3063	Zhao N, Chen Q G, Chen X, et al. Intestinal Dysbiosis Mediates Cognitive Impairment via the Intestine and Brain NLRP3 Inflammasome Activation in Chronic Sleep Deprivation[J]. Brain, Behavior, and Immunity, 2023, 108: 98-117.	Neuroscience Microbiology Metabolism	19.23
Mouse IL-1β Mouse IL-6 Mouse IL-18	E-EL-M0037 E-EL-M0044 E-EL-M0730	Meng J, Li N, Liu X, et al. NLRP3 Attenuates Intraocular Inflammation by Inhibiting AIM2 Mediated Pyroptosis through the P-SIK1/SREBF1 Pathway[J]. Arthritis & Rheumatology, 2022.	Neuroscience Immunology	15.48

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