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Neurotransmitters, Receptors & Transporters



Neurotransmission is communication between neurons as accomplished by the movement of chemicals or electrical signals across a synapse. Research into neurotransmission focuses on the production and transport of neurotransmitters in the synapse, and the effect of defective neurotransmission. After neurotransmitters have been released into the synaptic cleft, they are received by receptors in the postsynaptic neuron in order to relay a signal, either inhibiting or exciting another pathway in the body. Below are examples of the antibody and protein targets we offer for neurotransmitters, their receptors & related transporters.

GABA

γ -Aminobutyric acid or GABA is the chief inhibitory neurotransmitter in the mammalian central nervous system. It plays a role in regulating neuronal excitability throughout the nervous system. In humans, GABA is also directly responsible for the regulation of muscle tone. GABA occurs in 30-40% of all synapses; only glutamate is more widely distributed. Neurons in every region of the brain use GABA to fine-tune neurotransmission. Increasing GABA at the neuronal synapse inhibits the generation of the action potential of the neuron, thereby making it less likely to excite nearby neurons. In spastic diplegia in humans, GABA absorption becomes impaired by nerves damaged from the condition's upper motor neuron lesion, which leads to hypertonia of the muscles signaled by those nerves that can no longer absorb GABA.

Catalog No.	Product Name	Host	GABA		Applications
			Reactivity	Clone	
10R-G126A	GABA A Receptor alpha 1 antibody	Mouse	Bovine, Human, Avian, Pig	BD24	IHC, IP, WB
20R-2509	GABA A Receptor alpha 3 antibody	Rabbit	Human, Mouse, Rat	-	WB
70R-31194	GABA B Receptor antibody	Rabbit	Human, Mouse, Rat	-	WB, IHC, ELISA
70R-AR022	GABABR1 antibody	Rabbit	Human	-	WB
70R-AR023	GABABR2 antibody	Rabbit	Human	-	WB
70R-GR028	GABARAP antibody	Rabbit	Human	-	WB
70R-17388	GABARAP antibody	Rabbit	Human, Mouse, Rat	-	ELISA, WB
70R-9625	GABARAP antibody	Rabbit	Human	-	WB
70R-9080	GABARAP antibody	Rabbit	Human	-	WB
70R-2213	GABARAP antibody	Rabbit	Human, Mouse, Rat	-	WB
70R-3001	GABARAPL1 antibody	Rabbit	Human, Mouse, Rat	-	WB
70R-3000	GABARAPL1 antibody	Rabbit	Human, Mouse, Rat	-	WB
70R-17389	GABARAPL1 antibody	Rabbit	Human, Mouse, Rat	-	ELISA, IHC, WB
70R-15350	GABARAPL1 antibody	Rabbit	Human	-	ELISA, IHC, WB
60R-1866	GABARAPL1 antibody (biotin)	Rabbit	Human	-	ELISA, IHC, WB
60R-1865	GABARAPL1 antibody (FITC)	Rabbit	Human	-	ELISA, IHC, WB
60R-1864	GABARAPL1 antibody (HRP)	Rabbit	Human	-	ELISA, IHC, WB
70R-3393	GABARAPL2 antibody	Rabbit	Human, Mouse, Rat	-	WB
70R-17390	GABARAPL2 antibody	Rabbit	Human, Mouse, Rat	-	ELISA, IHC, WB
70R-15329	GABARAPL2 antibody	Rabbit	Human	-	ELISA, IHC, WB
70R-15326	GABARAPL2 antibody	Rabbit	Human	-	ELISA, IHC, WB
70R-9176	GABARAPL2 antibody	Rabbit	Human, Rat	-	WB
60R-1816	GABARAPL2 antibody (biotin)	Rabbit	Human	-	ELISA, IHC, WB
60R-1807	GABARAPL2 antibody (biotin)	Rabbit	Human	-	ELISA, IHC, WB
60R-1815	GABARAPL2 antibody (FITC)	Rabbit	Human	-	ELISA, IHC, WB
60R-1806	GABARAPL2 antibody (FITC)	Rabbit	Human	-	ELISA, IHC, WB
60R-1814	GABARAPL2 antibody (HRP)	Rabbit	Human	-	ELISA, IHC, WB
60R-1805	GABARAPL2 antibody (HRP)	Rabbit	Human	-	ELISA, IHC, WB
20R-2578	Vesicular GABA Transporter antibody	Rabbit	Human, Rat	-	IF

Serotonin

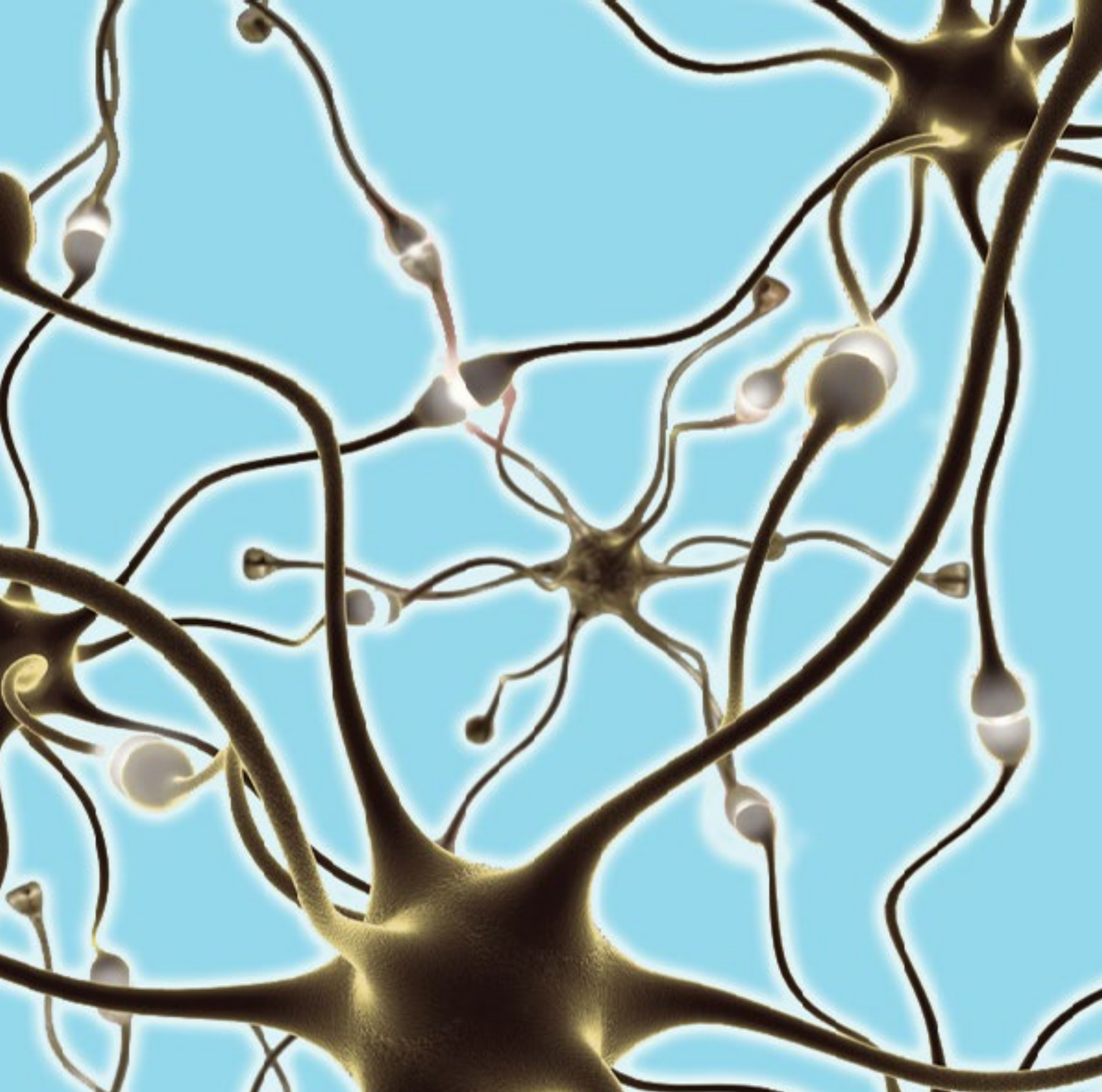
Serotonin or 5-hydroxytryptamine (5-HT) is a monoamine neurotransmitter. Biochemically derived from tryptophan, serotonin is primarily found in the pineal gland, the digestive tract, the central nervous system, and blood platelets. Serotonin plays an important part in the regulation of learning, mood, sleep and vasoconstriction (constriction of blood vessels). Experts say serotonin also might have a role in anxiety, migraine, vomiting and appetite and it is popularly thought to be a contributor to feelings of well-being and happiness. Modulation of serotonin at synapses is thought to be a major action of several classes of pharmacological antidepressants.

Serotonin					
Catalog No.	Product Name	Host	Reactivity	Clone	Applications
10R-S106a	Serotonin antibody	Mouse	Human	5HT-H209	IHC-F, IHC-P
10R-S108a	Serotonin Transporter antibody	Mouse	Rat	MAB1564	IHC
10-S06A	Serotonin antibody	Rat	Human	M09203	IHC
20R-SR004	Serotonin antibody	Rabbit	Human, Rat	-	IHC
20R-SR003	Serotonin antibody	Rabbit	Human, Mouse, Rat	-	IF, IHC
20C-CR2053R	Serotonin antibody	Rabbit	Human	-	User optimized
20C-CR2053S	Serotonin antibody	Sheep	Human	-	User optimized
70R-3768	Serotonin receptor 2B antibody	Rabbit	Human	-	WB
70R-5080	Serotonin receptor 3B antibody	Rabbit	Human	-	WB, IHC
70R-5223	Serotonin receptor 3C antibody	Rabbit	Human	-	WB
70R-5173	Serotonin receptor 3E antibody	Rabbit	Human	-	WB

Dopamine

Dopamine functions as a neurotransmitter in the brain and is produced in several areas of the brain, including the substantia nigra and the ventral tegmental area. It is a neurohormone that is released by the hypothalamus inhibiting prolactin release from the anterior lobe of the pituitary. Regulation of dopamine plays a crucial role in our mental and physical health. Dopamine affects brain processes that control movement, emotional response, and ability to experience pleasure and pain. In Parkinson's disease, the dopamine-transmitting neurons die leaving sufferers completely deficient in dopamine leading to motor control malfunction. Dopamine also plays a major role in addiction, and a variety of addictive drugs, including stimulants such as cocaine, amphetamine, and methamphetamine, act by amplifying the effects of dopamine.

Dopamine					
Catalog No.	Product Name	Host	Reactivity	Clone	Applications
10-D40A	Dopamine antibody	Mouse	Human	M32192	ICC
70R-12594	Dopamine beta Hydroxylase antibody	Rabbit	Human	-	IF, ICC, IHC-P, WB
20R-DR001	Dopamine D2 Receptor antibody	Rabbit	Rat, Human, Lobster, Squid, Crayfish	-	ELISA, IHC, WB
20R-DR009	Dopamine D3 Receptor antibody	Rabbit	Rat	-	ELISA, IHC, WB
70R-DR002	Dopamine D3 Receptor antibody	Rabbit	Human	-	ELISA, IHC, WB
70R-DR001	Dopamine Receptor 2 antibody	Rabbit	Rat	-	ELISA, IHC, WB
70R-DR004	Dopamine Transporter antibody	Rabbit	Rat, Human, Dog, Mouse	-	ELISA, IHC, WB



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