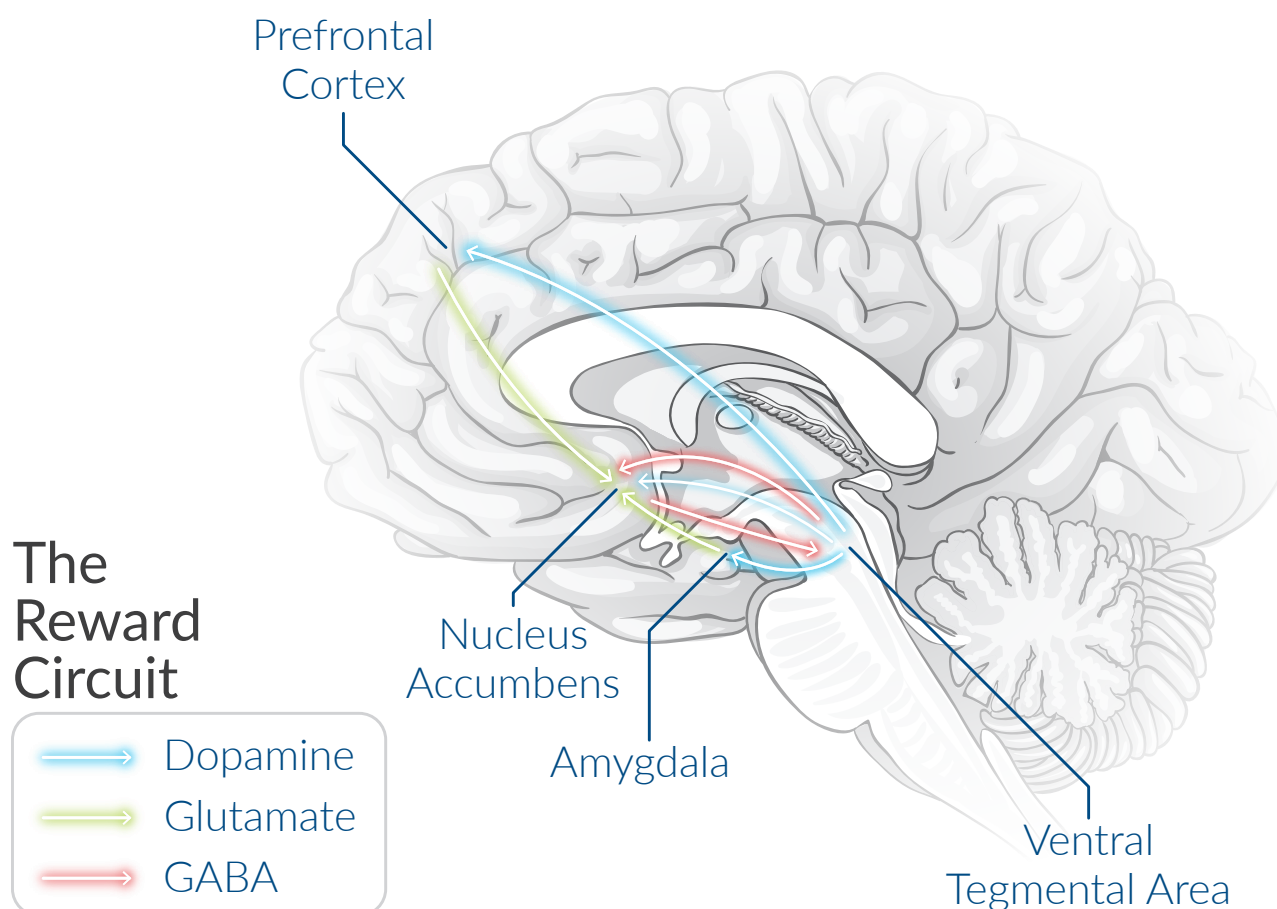


# Addiction Research Tools



Addiction is a neuroadaptive process in which drugs of abuse alter cellular and molecular aspects of neural function. Cayman offers a range of products to study targeted brain circuits mediating the behavioral effects of these drugs. This includes aldehyde dehydrogenase (ALDH) inhibitors, NMDA receptor partial agonists, metabotropic glutamate receptor antagonists, long-acting opioids,  $\alpha_2$ -adrenoceptor agonists, nicotinic and muscarinic acetylcholine receptor antagonists, dopamine receptor partial agonists and reuptake inhibitors, NPY and CRF antagonists, and GABAergic signaling modulators. Additionally, Cayman offers more than 1,600 analytical standards to quickly identify and understand the physiological and toxicological properties of commonly abused drugs.



## Dopamine Receptor Agonists/Antagonists

Item No.	Product Name	Summary
9001394	N-Docosahexaenoyl Dopamine	A conjugate of DHA and dopamine
21992	Dopamine (hydrochloride)	An agonist at dopamine receptors ( $D_{1-5}$ )
22354	L-741,626	A selective antagonist for the dopamine receptor $D_2$
11981	Pramipexole (hydrochloride)	An agonist of the $G_q$ -linked dopamine receptors $D_2$ , $D_3$ , and $D_4$
11982	SB 277011A (hydrochloride)	A selective antagonist of the dopamine $D_3$ receptor
19150	SKF 38393 (hydrobromide)	A partial agonist of dopamine $D_1$ -like receptor subtypes $D_1$ and $D_5$

## Dopamine Transport Antibodies and Inhibitors

Item No.	Product Name	Summary
10009372	Dopamine Transporter (C-Term) Polyclonal Antibody	<b>Host:</b> Rabbit • <b>Applications:</b> IHC, WB • <b>Species Reactivity:</b> (+) WB - Human striatal samples (SDS-solubilized), WB - Mouse striatal samples (SDS-solubilized), IHC - Macaque monkey brain
10009373	Dopamine Transporter (Extracellular Loop 2) Polyclonal Antibody	<b>Host:</b> Rabbit • <b>Applications:</b> IHC, WB • <b>Species Reactivity:</b> (+) WB - Human striatal samples (SDS-solubilized), IHC - Human brain (formaldehyde-fixed), IHC - Monkey brain (formaldehyde-fixed)
15622	GBR 12909 (hydrochloride)	A blocker of dopamine uptake
17700	GBR 12935 (hydrochloride)	A selective inhibitor of dopamine uptake

## NMDA Agonists and Antagonists

Item No.	Product Name	Summary
16132	1-Aminocyclopropanecarboxylic Acid	An NMDA receptor partial agonist
14539	D-AP5	A selective NMDA antagonist
14584	Ibotenic Acid	An excitotoxic NMDA and mGluR agonist
14184	Memantine (hydrochloride)	An NMDA open-channel blocker
10009019	(+)-MK-801 (hydrogen maleate)	A selective, non-competitive NMDA open-channel blocker
14581	NMDA	An excitatory neurotransmitter

## mGluR Agonists and Antagonists

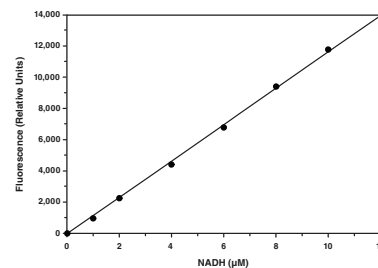
Item No.	Product Name	Summary
11986	Biphenylindanone A	A positive allosteric modulator of mGluR2
21486	CPCCOEt	A selective, non-competitive mGluR1b antagonist
13852	DL-AP3	A competitive mGluR1 antagonist
15351	LY379268	A brain-permeable, selective group II mGluR2/3 agonist
18862	MMPIP (hydrochloride)	A reversible allosteric antagonist of mGluR7
14961	MTEP (hydrochloride)	A negative allosteric modulator of mGluR5a
21806	UBP 310	An antagonist of GluR5

View a complete list of mGluR agonists and antagonists online at [www.caymanchem.com](http://www.caymanchem.com)

## Convenient Monitor of ALDH Activity

### Aldehyde Dehydrogenase Activity Assay Kit - Item No. 700800

- Measure ALDH activity in tissue homogenates, cell culture samples, and purified ALDH preparations
- Assay 20 samples in duplicate
- Measure ALDH activity down to 0.4 U/ml



## ALDH Inhibitors

Item No.	Product Name	Summary
21868	CM037	An ALDH1A1 inhibitor
18318	CVT-10216	A reversible ALDH2 inhibitor
18319	NCT-501 (hydrochloride)	A selective, reversible inhibitor of ALDH1A1
14018	WIN 18,446	An ALDH1A2 inhibitor

## AMPA/Kainate Agonists and Antagonists

Item No.	Product Name	Summary
14618	CNQX	A competitive AMPA/kainate glutamate receptor antagonist
14914	NBQX (sodium salt)	A water-soluble AMPA/kainate glutamate receptor antagonist
14937	S18986	A positive allosteric modulator of AMPA receptors

## Long-Acting Opioids and Additional Receptor Agonists, Antagonists, and DREADD Ligands

Item No.	Product Name	Summary
21548	BMS 986188	A $\delta$ -opioid positive allosteric modulator
21553	DAMGO	A selective peptide agonist of the $\mu$ -opioid receptor
15520	Naltrexone (hydrochloride)	An antagonist of opioid receptors
9000705	Naltrindole (hydrochloride)	An antagonist of the human $\delta$ -opioid receptor
23582	Salvinorin B	The major deacetylated metabolite of salvinorin A used as a DREADD ligand
15599	SNC 80	A selective non-peptide agonist of the $\delta$ -opioid receptor

## GABA Modulators

Item No.	Product Name	Summary
18599	CGP 35348	A brain-accessible GABA <sub>B</sub> receptor antagonist
10008346	Gabapentin	A GABA analog
20919	Ganaxolone	A positive modulator of GABA <sub>A</sub> receptors
13667	Muscimol	A full GABA <sub>A</sub> agonist and partial GABA <sub>C</sub> agonist
17355	Saclofen	A GABA <sub>B</sub> receptor antagonist
14585	SR 95531 (hydrobromide)	An antagonist of GABA <sub>A</sub> receptors

## $\alpha_2$ -Adrenoceptor Modulators

Item No.	Product Name	Summary
9001181	Atipamezole (hydrochloride)	A potent $\alpha_2$ -adrenoceptor antagonist
17853	Detomidine (hydrochloride)	A selective $\alpha_2$ -adrenoceptor agonist
15581	Dexmedetomidine (hydrochloride)	An $\alpha_2$ -adrenoceptor agonist
19869	Yohimbine (hydrochloride)	An $\alpha_2$ -adrenoceptor antagonist

## Muscarinic AChR Antagonists

Item No.	Product Name	Summary
18674	Diphenidol (hydrochloride)	A non-selective mACh receptor antagonist
16606	Tropicamide	A selective muscarinic M <sub>4</sub> antagonist

## Nicotinic Receptor Agonists

Item No.	Product Name	Summary
20887	(-)-Nicotine (tartrate)	An agonist at neuronal nAChRs
20505	(±)-Nornicotine	A neuronal nAChR agonist
17424	PNU 282987	A potent, selective agonist of $\alpha 7$ -containing nAChRs
14973	SIB 1553A (hydrochloride)	A $\beta 4$ subunit-selective nAChR agonist

## NPY (Neuropeptide Y)/CRF (Corticotropin-releasing Factor) Receptor Antagonists

Item No.	Product Name	Summary
15147	Antalarmin (hydrochloride)	A selective, nonpeptide antagonist of the CRH receptor 1
20732	CP 154,526 (hydrochloride)	A selective, nonpeptide CRF <sub>1</sub> antagonist
13947	JNJ-5207787	A selective antagonist of NPY receptor Y <sub>2</sub>
15071	Neuropeptide Y (human, rat)	A key neuropeptide of the gut-brain axis

## Analytical Standards

### Amphetamines and Other Stimulants

Item No.	Product Name
15650	D-Amphetamine (hydrochloride) (exempt preparation)
10488	Bupropion (hydrochloride)
15655	(-)-(S)-Cathinone (hydrochloride) (exempt preparation)
22165	Cocaine (hydrochloride)
11159	Dimethocaine (hydrochloride)
11630	Ketamine (hydrochloride)
13971	3,4-MDMA (hydrochloride)
15657	Mephedrone (hydrochloride) (exempt preparation)
15656	Methcathinone (hydrochloride) (exempt preparation)
14276	PCP (hydrochloride)

Over 200 amphetamine and other stimulant standards available online

### Opioids

Item No.	Product Name
14025	Buprenorphine (hydrochloride)
22801	Crotonyl fentanyl
21739	Cyclopropyl fentanyl (hydrochloride)
15126	Desomorphine
21536	Dihydromorphine
13114	7-hydroxy Mitragynine
11487	Salvinorin A
18596	U-47700
20285	U-51754 (hydrochloride)

Over 300 opioid standards available online

### Benzodiazepines and Other CNS Depressants

Item No.	Product Name
15287	$\alpha$ -hydroxy Alprazolam
18173	Clonazolam
15554	Diclazepam
15889	Estazolam
22910	Gabapentin
15661	GHB (sodium salt) (exempt preparation)
11449	Ketazolam
15891	Lorazepam
16193	Midazolam
22577	Triazolam

Over 70 benzodiazepines and other CNS depressant standards available online

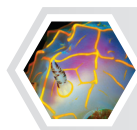
### Cannabinoids and Phytocannabinoids

Item No.	Product Name
71670	AM251
90080	Cannabidiol
9001574	Cannabidivarin
15293	Cannabigerol
9001572	Cannabigerolic Acid
90084	(-)-CP 55,940
14042	$\Delta^8$ -THC
12068	$\Delta^9$ -THC
10009023	(+)-WIN 55,212-2 (mesylate)

Over 700 cannabinoid and phytocannabinoid standards available online

Bulk material available for academic research at qualified institutions

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To view a complete list of our neuroscience research tools, visit us online at [www.caymanchem.com](http://www.caymanchem.com)