

# BIOCHEMICALS



**BRINGING QUALITY & EFFICIENCY TO RESEARCH** 





# **Your Partner for Biochemicals**

Biozol Diagnostica Vertrieb GmbH are proud to have been providing products and services within the life science arena since 1989. We always aspire to give our customers the fastest response times and high standards of customer service.

BIOZOL's impressive product portfolio contains over 1 million high quality biochemicals selected from leading global manufacturers. Our extensive range includes chemicals and reagents for use in a wide variety of laboratory applications: small molecules, inhibitors and activators as well as cytokines to investigate cell signaling pathways; specialized chemicals and compound libraries for drug discovery and development; biomarkers with applications e.g. in pharmacology and screening; detergents for proteomic studies; lipids for use as reference standards and reagents; building blocks as basic components for organic synthesis or bioconjugation reagents.



# We set our standards high. So you can, too.

Since 1985, Anatrace has been the leader in providing high quality detergents, lipids, screening kits, and tools for membrane protein structural research – cited nearly 3000 times since 2014. Check out our most commonly used detergents, as well as some of our newest products on the right.



#### MALTOSIDE DETERGENTS

- DDM and DM are the two most commonly used detergents in membrane protein structural biology in the past 10 years
- Anagrade detergents are >99% pure
- Alkyl chain lengths available from 6 to 14 carbons.

#### D310 – Dodecyl Maltoside

- D322 Decyl Maltoside
- U300 Undecyl Maltoside



#### **GLUCOSIDE DETERGENTS**

- OG and NG are the third and fourth commonly used detergents in membrane protein structural biology in the past 10 years
- Anagrade detergents are >99% pure
- OG and NG are easy to exchange into other detergents
- Alkyl chain lengths available from 6 to 12 carbons
- 0311 Octyl Glucoside
- N324 Nonyl Glucoside
- D321 Decyl Glucoside



#### **NEOPENTYL GLYCOLS**

- Two alkyl glucoside detergents linked by a quaternary carbon
- Low CMC values
- Compatible with Crystallization and Cryo-EM experiments
- LMNG is commonly used for GPCR structural studies
- NG310 Lauryl Maltose Neopentyl Glycol
- NG311 Octyl Glucose Neopentyl Glycol
- NG322 Decyl Maltose Neopentyl Glycol



#### AMPHIPOLS

- Amphipathic surfactants for maintaining membrane proteins in detergent free solutions
- A8-35 and PMAL-C8 are commonly used in Cryo-EM studies
- Nonionic version available soon
- Biotinylated versions available for biophysical characterization
- A835 Amphipol A8035

#### P5008 – Amphipol PMAL-C8

BAM01 - Biotinylated A8-35





#### **GLYCO-DIOSGENIN (GDN)**

GDN is rapidly gaining favor as a synthetic, drop-in substitute for Digitonin -- ideal for the solubilization, purification, and Cryo-EM studies of membrane proteins. GDN avoids many of the common issues found with Digitonin, such as low solubility and batch-to-batch variability. Many high-profile Cryo-EM structures of membrane proteins have been determined using GDN in the past year including the GLP1-G Protein complex, and the intact structure of bacterial ATP synthase.



#### **DIISOBUTYLENE-MALEIC ACID (DIBMA)**

We are pleased to introduce the development of our own version of DIBMA as a sodium salt, an alternative to detergents for the solubilization and purification of membrane proteins. Purified using our own proprietary methods, and subjected to rigorous quality control tests, DIBMA can be used directly without any additional hydrolysis, dialysis, or purification.



#### PREMIXED LMNG:CHS AND DDM:CHS

Our premixed LMNG:CHS is the newest addition in our expanding line of premixed solutions. This new mixture takes full advantage of the growing popularity of LMNG mixed with CHS, which was the third most commonly used detergent in 2017 for the solubilization of membrane proteins. And our DDM:CHS mixture is one of the most commonly used detergents for the solubilization and purification of eukaryotic membrane proteins.



#### **TOOLS FOR LCP**

We've recently launched 7.7 MAG as the latest addition to the growing panel of LCP lipids offered by Anatrace. Other host lipids include 9.9 MAG (monoolein) and 9.7 MAG (monopalmitonian). To save you time and simplify your workflow, we also offer a premixed monoolein:cholesterol in a 10:1 ratio. No more dissolving lipids in chloroform or worrying if all of the solvent is removed.



ApexBio is a premier supplier of small molecule chemicals and PCR en-zymes for biomedical researches. Over 8,000 products are made with care to support scientists in research areas such as Apoptosis, Epigenetics, Cancer Biology and more. Our products have been cited by thousands of research articles published on top journals.

Withstrongcapabilities of chemical synthesis and assay development, ApexBio develops and manufactures modified nucleotides, mRNA tran-scription, oligonucleotides, and essential enzymes in mRNA transcription. In addition, ApexBio provides satisfying customer service and fast-response technical support to customers across the world.

#### Our featured products include:

- Modified mRNA products
- Phosbind Reagents
- DiscoveryProbe<sup>™</sup> Compounds Screening Libraries

#### Phos binding reagent acrylamide / Cat. No. F4001



Phospho-protein X (P-protein X) were treated with Dephosphorylation Agent Y or Z for 10 min at  $30^{\circ}$ C. P-protein X and dephosphorylated protein (protein X) were then separated by 8% Phos binding SDS-PAGE gel (30 µM Phosbind Acrylamide and 120 µM MnCl2 added).

#### **Modified mRNA products**



\*To maximize the mRNA yield, we use our proprietary engineered T7 RNA polymerase which outperforms its wild type form. K1044, K1043, K1046, K1045 will be available soon.



# **Small Molecules**

### **Biorbyt dares to do things differently**

Based in Cambridge, one of Europe's largest bioscience hubs, Biorbyt has a simple yet challenging mission: to provide the best service to the global scientific community.

As a team of scientists with many years of bench experience, we know first hand the issues you face every day. That's why we've been working with some of the world's finest researchers and academics to develop products of the highest quality. And that's why we carefully manufacture and meticulously test a wide range of reagents to meet your needs, whatever they are.

Small molecules are low molecular weight organic compounds that regulate a biological process. Their mode of action occurs through activation or inhibition of cellular pathways. Because of their function as antagonists or agonists, these organic compounds can be developed as pharmacological agents to treat disease. Small molecules are used as research tools to investigate ion channel function, cell signaling pathways, enzyme inhibition and nuclear receptor function.

Biorbyt has an extensive range of small molecules available for application in such scientific studies. Our aim is to provide the best service to the global scientific community by helping you to simplify the buying process and allowing you to focus on your valuable research. Take a look at our product pages, where you will find helpful data to allow you to select the small molecule perfect for your work. Our data generally includes CAS numbers, molecular formulas and weights, storage and solubility information. Where possible we also show the molecular structure on each product page to help you make sure you're purchasing the compound you need. Our molecules are competitively priced and CofA are available for all products.

## >16,500 Small molecules in our catalogue including: Agonists and Antagonists >100 Antibiotics >1500 Inhibitors Ion Channel Modulators >4,500 Natural Products >9,500 Small Molecules Hormones

## Focusing on pathways including:

Alzheimer's Apoptosis Autophagy GPCR JAK/STAT MAPK Nf-kb Wnt

	Target	Catalogue No.		CAS No	
	BQ-788	orb181359			
Agonists				[156161-89-6] [1163-36-6]	
and	Clemizole Hydrochloride	orb181222		•	
Antagonists	Anamorelin	orb181194		[249921	-
_	WZ 811	orb181180		[55778-0	-
	MDL 29951	orb181054		[130798	-51-5]
	Target	Catalogue No.		CAS No	
	Linezolid (PNU-100766)	orb180857		[165800-03-3]	
	Biapenem	orb181222		[1163-36	-
Antibiotics	Meropenem	orb134700		- [96036-0	-
	Ciprofloxacin (Cipro)	orb134677		[85721-33-1]	
	Cefdinir (Omnicef)	orb134691		[91832-40-5]	
	Townsh	Cotologue No	_	-	
	Target 10058-F4	Catalogue No. orb181392			
				[403811-55-2] [802904-66-1]	
Inhibitors	AZD1981	orb181389		•	-
	TAPI-1	orb181377		[171235	-
	Bromosporine	orb181360		[161999	-
	SIRT2 Inhibitor II, AK-7	orb181357		[420831	-40-9]
	Target	Catalogue No.		CAS No	
1	Milrinone	orb180785		[78415-72-2]	
lon	A-803467	orb180777		[944261-79-4]	
Channel Modulators	HC-030031	orb154740		[349085-38-7]	
Wouldtors	Strontium ranelate	orb134750		[135459-87-9]	
	Repaglinide	orb134749		[135062	-02-1]
	Target	Catalogue No.		CAS No	
	1- Deoxynojirimycin	orb390028		[19130-9	
Natural	(-)- Epigallocatechin (EGC)	orb390036		- [970-74-	-1]
Products	5- Hydroxymethylfurfural	orb390016		- [67-47-0	
	3- Butylidenephthalide	orb390021		[551-08-	-
	Acetylshikonin	orb390014		[54984-9	-
					Tested
	Name		Catalog	jue No.	Applications
Small					
	S-Adenosyl-L-homocysteine -C	OVA conjugate	orb5273	89	ELISA
	, ,	, ,	orb5273 orb5273		ELISA ELISA
Small Molecules	5-hydroxytryptamine-OVA conj	ugate		570	
	5-hydroxytryptamine-OVA conj The metabolite of nitrofurazone	ugate	orb5273 orb5273	570 63	ELISA ELISA
	5-hydroxytryptamine-OVA conj The metabolite of nitrofurazone Salbutamol-OVA conjugate	ugate	orb5273	970 963 943	ELISA
	5-hydroxytryptamine-OVA conj The metabolite of nitrofurazone	ugate	orb5273 orb5273 orb5273	970 963 943	ELISA ELISA ELISA ELISA
	5-hydroxytryptamine-OVA conj The metabolite of nitrofurazone Salbutamol-OVA conjugate	ugate	orb5273 orb5273 orb5273 orb5273	970 963 943	ELISA ELISA ELISA ELISA Tested
	5-hydroxytryptamine-OVA conj The metabolite of nitrofurazone Salbutamol-OVA conjugate Ractopamine-OVA conjugate Name	ugate	orb5273 orb5273 orb5273 orb5273 Orb5273	370 363 343 341 3 <b>4</b> 1 <b>Jue No.</b>	ELISA ELISA ELISA ELISA
	5-hydroxytryptamine-OVA conj The metabolite of nitrofurazone Salbutamol-OVA conjugate Ractopamine-OVA conjugate Name Progesterone-OVA conjugate	ugate	orb5273 orb5273 orb5273 orb5273 <b>Catalog</b> orb5274	670 663 643 641 <b>Jue No.</b>	ELISA ELISA ELISA ELISA <b>Tested</b> Applications ELISA
Molecules	5-hydroxytryptamine-OVA conj The metabolite of nitrofurazone Salbutamol-OVA conjugate Ractopamine-OVA conjugate Name Progesterone-OVA conjugate Estrone-OVA conjugate	ugate	orb5273 orb5273 orb5273 orb5273 <b>Catalog</b> orb5274 orb5274	670 663 643 641 <b>Jue No.</b> 605 396	ELISA ELISA ELISA ELISA Tested Applications ELISA ELISA
Molecules	5-hydroxytryptamine-OVA conj The metabolite of nitrofurazone Salbutamol-OVA conjugate Ractopamine-OVA conjugate Name Progesterone-OVA conjugate Estrone-OVA conjugate Estradiol-OVA conjugate	ugate	orb5273 orb5273 orb5273 orb5273 <b>Catalog</b> orb5274 orb527 orb527	570 563 543 541 541 505 5396 394	ELISA ELISA ELISA ELISA Tested Applications ELISA ELISA
Molecules	5-hydroxytryptamine-OVA conj The metabolite of nitrofurazone Salbutamol-OVA conjugate Ractopamine-OVA conjugate Name Progesterone-OVA conjugate Estrone-OVA conjugate	ugate	orb5273 orb5273 orb5273 orb5273 <b>Catalog</b> orb5274 orb5274	570 563 543 541 505 505 505 505 505 505 505 505 505 50	ELISA ELISA ELISA ELISA Tested Applications ELISA ELISA



Biovision is a leader in science and technology, providing innovative products and services for life science research and drug discovery. We offer a wide selections of quality chemicals in high purity and convenient sizes. We do not only provide chemicals listed in the catalog, but can also supply many chemicals that are not listed here.

Product Name	lo. of Product
Activators-Inducers, Agonist	s, etc.
Activators-Inducers, Agonists, etc.	243
Adenylase Cyclase Activators	4
Adiponectin Receptor Agonists	3
AMPK Activators	11
Autophagy Inducers	3
Cell Stimulation Cocktails	2
Channel Openers	2
DREADD Agonists	2
Glucokinase (GKA) Activators	1
Guanylyl Cyclase Activators	7
HAT Activators	1
Hedgehog Signaling Pathway Agonists	6
Integrin Agonists	1
NLRP3 Inflammasome Activators	3
Oct3-4 Inducers	1
p53 Activators	16
PPAR Agonists	17
Pro-caspase Activators	1
Protein Kinase Activators	30
RAR agonists	7
ROR Ligands	3
Sirtuin Activators	6
Smoothened (Smo) Agonists	9
STING Ligands	6
TGR5 Receptor Agonists	4
Toll-Like Receptor (TLR) Agonists	7
Other Agonists	102
Antibiotics	
Antibiotics	113
Anticancer Agents	
Anticancer Agents	112
Antioxidants	
Antioxidants	56
Antiviral Agents	
Antiviral Agents	34
Apoptosis Inducers	
Apoptosis Inducers	26
Apoptosis Inhibitors	
Apoptosis Inhibitors	41
Apoptosis Inhibitors	2
Caspase & Granzyme B Inhibitors	39

Product Name	No. of Product			
Calcium Modulators				
Calcium Modulators	14			
Detergents and Related Pro	••			
Detergents and Related Products	39			
Detergents	34			
Non-detergent Sulfobetaines (NDSBs) 5				
Dyes-Stains, Probes, Substra	-			
Dyes-Stains, Probes, Substrates, etc.	124			
Cofactors	8			
Dyes-Stains, etc.	16			
Indicators	4			
Probes	28			
Substrates	69			
Enzyme Inhibitors				
Enzyme Inhibitors	2045			
Enzyme Inhibitors (A-Z)	1974			
ACAT Inhibitors	8			
ACC Inhibitors	5			
Adenylase Cyclase Inhibitors	4			
Aldo-Keto Reductase (AKR) Inhibitors	3			
Androgen Receptor Antagonists	3			
Angiogenesis Inhibitors	13			
Angiotensin Receptor Antagonists	4			
Angiotensin-Converting Enzyme (ACE) Inhibitors	11			
Arginase Inhibitors	2			
Aromatase Inhibitors	5			
ATPase Inhibitors	9			
Autophagy Inhibitors	7			
Bcl-2 Inhibitors	18			
BMP Inhibitors	4			
Bone Resorption Inhibitors	3			
Bromodomain Inhibitors	31			
Calpain Inhibitors	8			
Caspase & Granzyme B Inhibitors	59			
Cathepsin Inhibitors	6			
CDc42 Inhibitors	3			
Cell Adhesion Inhibitors	1			
CETP Inhibitors	9			
Chloride Channel Blockers	3			
Cholesterol Transport Inhibitor	2			
Cyclooxygenase (COX) Inhibitors	16			
Dipeptidyl Peptidase Inhibitors	15			

Product Name	No. of Product
DNA Ligase Inhibitors	2
DprE1 Inhibitors	4
DUBs (Deubiquitinating Enzymes) and related	10
Inhibitors	10
Elastase Inhibitors	5
FAAH Inhibitors	4
Farnesyl Protein Transferase (FPT) Inhibitors	8
Fatty Acid Synthase (FAS) Inhibitors	6
Ferroptosis Inhibitors	4
Glucosidase Inhibitors	3
GLUT1 Inhibitors	7
Glutamate Receptor Antagonists	1
Glutamate Uptake Inhibitors	2
Glycolysis Inhibitors	6
GST Inhibitors	4
GTPase Inhibitors	3
Guanylate Cyclase Inhibitors	1
Heat Shock Protein (Hsp) Inhibitors	19
Hedgehog (Hh) Signaling Pathway Antagonists	27
HIF Inhibitors	8
HIF-PH Inhibitors	6
Histone Acetyltransferase (HAT) Inhibitors	9
Histone Deacetylase (HDAC) Inhibitors	61
Histone Demethylase (HDM) Inhibitors	30
HIV Integrase Inhibitors	2
HMG-CoA Inhibitors	11
Indoleamine 2,3-dioxygenase (IDO) Inhibitors	7
Inflammasome Inhibitors	13
Isocitrate Dehydrogenase (IDH) Inhibitors	6
KMO (Kynurenine 3-monoxygenase) Inhibitors	2
Lactate Dehydrogenase (LDH) Inhibitors	3
Lipase Inhibitors	2
Lipoxygenase (LO) Inhibitors	4
Matrix Metalloproteinase (MMP) Inhibitors	18
MDM2 Inhibitors	11
Methyltransferase Inhibitors	60
Microtubule Inhibitors	31
MIF Antagonists	2
Mitochondrial Division Inhibitors	1
Mitochondrial Electron Transport Chain Inhibitors	6
Monoamine oxidase (MAO) Inhibitors	6
Multidrug Resistance (MDR) Inhibitors	9
Myeloperoxidase (MPO) Inhibitors	1
NAALADase Inhibitors	1
Nampt Inhibitors	5
Necroptosis and Necrosis Inhibitors	9
NF-KB Pathway Inhibitors	23
Nitric Oxide Synthase (NOS) Inhibitors	9
NLRP3 Inflammasome inhibitors	4
Nuclear Export Inhibitors	1
p53 Inhibitors	3
15-PGDH Inhibitors	2
PCSK9 Inhibitors	1
Phosphatase Inhibitors	36

Product Name	No. of Product
Phosphodiesterase (PDE) Inhibitors	24
Phospholipase Inhibitors	6
Poly (ADP-ribose) Polymerase (PARP) Inhibitors	19
PPAR Antagonists	9
Protease Inhibitors	51
Proteasome Inhibitors	25
Protein Arginine Deiminase (PAD) Inhibitors	4
Protein Kinase Inhibitors	754
Protein-Protein Interaction (PPI) Inhibitors.	22
PTEN Inhibitors	4
Rac1 Inhibitors	2
Renin Inhibitors	2
S-Adenosyl-L-homocysteine (SAH) hydrolase	4
inhibitors	4
SCD1 Inhibitors	5
Secretase Inhibitors	20
SGLT-2 Inhibitors	10
SIRT Inhibitors	13
Smad Inhibitors	1
Sodium Channel Modulators	3
Sphingosine Kinase (SK) Inhibitors	3
SREBP Activation Inhibitors	3
Stat Inhibitors	19
STING Inhibitors	3
SUMOYIation Inhibitors	2
TACE Inhibitors	3
Tankyrase Inhibitors	4
Thioredoxin inhibitors	2
Topoisomerase Inhibitors	16
Ubiquitin Activating Enzyme E1 Inhibitor	1
Ubiquitin Ligase (E3) Inhibitors	9
Ubiquitin Proteasome Pathway Inhibitors	39
VCP-p97 Inhibitors	6
Wnt Signaling Inhibitors	16
Other Inhibitors	336
Immunosuppressants	
Immunosuppressants	23
lonophores	
Ionophores	10
Molecular Biology	
Biochemical for Molecular Biology	10
Protein Purification Reag	
Protein Purification Reagents	72
Crosslinking Agents	31
Detergents	30
Phosphatase Inhibitor Cocktails	5
Protease Inhibitor Cocktails	14
Reducing Agents	5
Stem Cell Research	5
Biochemical for Stem Cell Research Tools	82
Neuronal Transdifferentiation Modulators	3
Stem Cell Fate Regulators	19
Other Biochemicals	39
	39







# CUTTING-EDGE IMMUNO-ONCOLOGY SMALL MOLECULE REAGENTS



CANCER CELL METABOLISM



Focus Biomolecules offers a large and constantly expanding portfolio of cutting edge small molecule cellular signaling reagents designed to facilitate all types of life science research. We also offer focused chemical libraries - we have the experience to design the library you need or source the library you have designed. Focus Biomolecules provides custom organic synthesis - we will give you a fair price, keep you updated throughout the synthetic process, and endeavor to assist you in all phases of your project utilizing our more than 25 years of experience in the life sciences field. All of the products we offer are high purity and extensively quality controlled for reliable and reproducible results. We do our own synthetic and analytical chemistry in our laboratories in Plymouth Meeting, PA.



# Say **hello** to **affordable**, **trusted**, life science tools!

Agonists & antagonists Enzyme inhibitors & activators Antibodies Peptides & proteins Dyes & stains Fluorescent tools

# **Sello**

#### D-AP5 (Cat.No. HB0225)

Our D-AP5 is an essential tool in many neuroscience labs. Used routinely, cited in the literature, and endorsed by researchers worldwide, here are 5 great reasons to try it...

- Exceptional quality >99% purity
- Save 50% compared with prices of other suppliers
- · Biologically tested
- · Cited in the literature
- Rated 5\* by customers

#### Recent citations include:

**Beimer et al** (2018) Positive regulation of raphe serotonin neurons by serotonin 2B receptors.

Neuropsychopharmacology PubMedID: 29453444

**Joshi et al** (2018) Kcnj6(GIRK2) trisomy is not sufficient for conferring the susceptibility to infantile spasms seen in the Ts65Dn mouse model of down syndrome. Epilepsy Res. PubMedID: 29929098

**Takacs et al** (2018) Co-transmission of acetylcholine and GABA regulates hippocampal states. Nat Commun PubMedID: 30030438

**Lind et al** (2017) Structural basis of subunit selectivity for competitive NMDA receptor antagonists with preference for GluN2A over GluN2B subunits. Proc Natl Acad Sci USA PubMedID: 28760974

#### Novel potent hM3Dq & hM4Di ligands – water soluble

Introducing JHU37160 dihydrochloride and JHU37152 dihydrochloride - novel DREADD ligands with high potency at hM3Dq and hM4Di DREADDs in *in vitro* functional assays.

In BRET-based and fluorescence assays:

- JHU37160 displays EC<sub>50</sub> values of 0.2 nM (hM4Di) and 18.5 nM (hM3Dq)
- JHU37152 displays EC<sub>50</sub> values of 0.5 nM (hM4Di), and 5 nM (hM3Dq)

Both ligands have high affinity for hM4Di and hM3Dq.

D-AP5 (Cat.No. HB0225)



JHU37160 dihydrochloride (Cat.No. HB6216)



JHU37152 dihydrochloride (Cat.No. HB6253)

#### ROCK inhibitor Y-27632 (Cat.No. HB2297)



The ROCK inhibitor Y-27632 is a selective and cell permeable inhibitor of the Rho-associated protein kinase (ROCK) (K<sub>j</sub> values are 0.14, 26,25 and >250  $\mu$ M at p160ROCK, PKC, PKA and MLCK respectively).

Y-27632 has many biological actions and is an important small molecule modulator of stem cells. It diminishes hESC and hiPSC dissociation-induced apoptosis, enhances survival and colony formationof dissociated hESC without affecting pluripotency or self-renewal.

Y-27632 also improves hESC and iPSCs postthaw viability and survival rate during cryopreservation. Additionally, Y-27632 inhibits smoothmuscle contractility and shows antihypertensive effects.

#### CellAura - Fluorescent Ligand Range

CellAura fluorescent ligands are state-of-the-art fluorescent tools designed for use in life science research and drug discovery. We have combined molecular pharmacology and synthetic chemistry to provide you with high quality fluorescent ligands that are as informative as label-free kinetics, as safe as antibodies and as easy to use as radioligands.

CellAura fluorescent ligands target G protein coupled receptors (GPCRs) and are comprised of three units:

- a pharmacophore e.g. a synthetic agonist or antagonist
- a fluorescent dye (the fluorophore)
- a linker which connects the pharmacophore with the dye

#### A new alternative to radioligands

Visualization of the fluorescent tracer bound to a GPCR offers you several advantages compared to using conventional radioisotope-labelled ligands:

- Immediate 'real time' readout
- Visual confirmation of receptor localisation
- Multi-colour and multi-parameter data generation
- Miniaturisation capability (one cell per data point)
- No scintillation detection costs
- · Enhanced safety with reduced costs no radioisotope use and disposal

CAT NO.	PRODUCT NAME	PHARMACOPHORE	EXCITATION/ EMISSION	COLOUR	PACK SIZE
HB7812	CellAura fluorescent adenosine A3 antagonist [XAC]	XAC-derivative	633/ 650 nm	Red	50µg
HB7813	CellAura fluorescent adenosine agonist [NECA]	NECA-derivative	638/ 657 nm	Red	50µg
HB7814	CellAura fluorescent adenosine antagonist [XAC]	XAC-derivative	636/ 651 nm	Red	50µg
HB7816	CellAura fluorescent $\beta_2$ antagonist [(S)-propranolol-green]	(S)-Propranolol-derivative	488/ 525 nm	Green	50µg
HB7817	CellAura fluorescent $\beta_2$ antagonist [(S)-propranolol-red]	(S)-Propranolol-derivative	633/ 650 nm	Red	50µg
HB7818	CellAura fluorescent $\beta_2$ antagonist [(±)-alprenolol]	(±)-Alprenolol-derivative	633/ 650 nm	Red	50µg
HB7819	CellAura fluorescent $\beta_2$ antagonist [(±)-pindolol]	(±)-Pindolol-derivative	633/ 650 nm	Red	50µg
HB7820	CellAura fluorescent $\beta_2$ antagonist [(±)-propranolol]	(±)-Pindolol-derivative	633/ 650 nm	Red	50µg
HB7821	CellAura fluorescent $\beta_3$ agonist [(S)-carazolol]	(S)-Carazolol-derivative	633/ 650 nm	Red	50µg
HB7822	CellAura fluorescent D1 antagonist [SKF83566-green]	SKF83566-derivative	488/ 525 nm	Green	50µg
HB7824	CellAura fluorescent H1 antagonist [mepyramine]	Mepyramine-derivative	633/ 650 nm	Red	50µg
HB7825	CellAura fluorescent H <sub>2</sub> antagonist [aminopotentidine]	Aminopotentidine-derivative	633/ 650 nm	Red	50µg
HB7826	CellAura fluorescent H3 antagonist [clobenpropit]	Clobenpropit-derivative	633/ 650 nm	Red	50µg
HB7827	CellAura fluorescent M3 antagonist [pirenzepine]	Pirenzepine-derivative	633/ 650 nm	Red	50µg
HB7828	CellAura fluorescent 5-HT1A antagonist [NAN-190]	NAN-190-derivative	633/ 650 nm	Red	50µg



MedChemExpress (MCE) offers a wide range of high quality research chemicals and biochemicals including novel life-science reagents, reference compounds, APIs and natural compounds for laboratory and scientific use. MCE has knowledgeable and friendly customer service and technical support teams with years of experience in the life science industry. MCE will be a competent and trustworthy partner for your research and scientific projects.

We are client-centric and would like to hear from you about our products and services might better assist you.

#### Quality

Product quality is the key to our success and we take pride in offering only the highest-grade products. Product identity, quality, purity and activity are assured by our robust quality control and assurance polices, programs and procedures. We perform thorough analytical testing - including HNMR, LC-MS and HPLC stability testing and activity assays on our products and the results from these tests are available to clients.

#### Experience

Our chemists are highly experienced in molecular synthesis and the preparation of large quantities of structurally diverse and synthetically challenging molecules. We work with clients that have widely different needs and we have been very successful in meeting such needs.

#### Services

#### We offer:

- Structurally and synthetically diverse biologically active compounds
- Flexible order volume ranging from milligrams to kilograms scale
- On-time delivery of products



#### Inhibitors & Agonists

Over 9,500 selective inhibitors and agonists targeting 375 key proteins in 20 signaling pathways.







#### **Compound Screening Libraries (96-well)**

A collection of stored chemicals optimized for a specific research purpose, usually used in high-throughput screening, drug discovery and new indication research. MedChemExpress (MCE) compound libraries consist of over 4,000 small molecules with validated biological and pharmacological activities.





#### Peptides

Peptides are often used in functional analysis, antibody research, vaccine research and especially in the field of drug research and development. Peptides have a variety of biological functions, such as, anti-thrombosis, anti-hypertension, antibacteria, antivirus, anticancer and antioxidation, immunoregulation, and cholesterol- lowering effects.

MedChemExpress (MCE) offers a wide range of tag peptides, amino acid derivatives, blocking peptides, and bioactive peptides to customers.

#### Cytokines

Cytokines are small secreted signaling proteins that play important roles in cell signaling. They act via binding to specific cell-surface receptors and activating downstream intracellular signaling, which leads to changes in function or phenotype.

Cytokines regulate diverse biological processes including innate and acquired immunity, hematopoiesis, inflammation and repair through mostly extracellular signaling.



#### Discovery through partnership, Excellence through quality

Established in 2007, StressMarq Biosciences Inc. is a supplier of life science products that operates out of Victoria, Canada with a small, but dedicated group of scientists. Headed by our CEO and President Dr. Ariel Louwrier, StressMarq provides the research community with high-quality reagents backed with rigorous quality control data, expert scientific support, and fast international delivery.

With over 7,000 products, our growth can be attributed to the continual production of cutting edge research products. Our diverse portfolio of primary antibodies, antibody conjugates, proteins, immunoassay kits and small molecules bridges across the life sciences, including products for cancer research, cardiovascular disease, cell signaling and neuroscience. To aid research worldwide, StressMarq has an extensive network of international distributors that allow us to supply reagents to over 50 countries.

Recently StressMarq has manufactured cutting-edge research products for the study of neurodegenerative diseases. Our active alpha synuclein and tau preformed fibrils (PFFs) can induce protein aggregation, helping researchers to better understand the causes and mechanisms of neurodegeneration.

To complement these proteins, we have also released a line of small molecules that can be used to further study Alpha Synuclein and its' effects in both Parkinson's and Alzheimer's Disease:

#### Tolcapone (Cat No. SIH-540)

A COMT inhibitor that blocks fibril formation of  $\alpha$ -Synuclein and  $\beta$ -Amyloid, and protects against Amyloid-induced toxicity

CAS #: 134308-13-7 Purity: >98% (TLC); NMR (Conforms) Molecular Formula: C14H11NO5. Molecular Weight: 273.2 g/mol.



Chemical structure of Tolcapone (SIH-540), a COMT inhibitor. CAS #: 134308-13-7.

#### Entacapone (Cat No. SIH-578)

A COMT inhibitor that is similar to Tolcapone. It has been found to specifically inhibit Alpha Synuclein Aggregation *in vivo*, and inhibits a-synuclein-induced death in cellular models

CAS #: 130929-57-6 Purity: >98% (HPLC); NMR (Conforms) Molecular Formula: C14H15N3O5. Molecular Weight: 305.29 g/mol.



Chemical structure of Entacapone (SIH-578), a COMT inhibitor. CAS #: 130929-57-6.

#### Cordycepin (Cat No. SIH-576)

A Nucleoside Antagonist that displays anti-inflammatory effects and neuroprotective effects by inhibiting  $\alpha\beta$ -induced apoptosis in hippocampal neurons

CAS #: 73-03-0 Purity: >98% (HPLC); NMR (Conforms) Molecular Formula: C10H13N5O3. Molecular Weight: 251.2 g/mol.



Chemical structure of Cordycepin (SIH-576), a Nucleoside Antagonist. CAS #: 73-03-0.

#### Rasagaline mesylate (Cat No. SIH-577)

A MAO inhibitor that prevents alpha-synuclein-induced neuronal death

CAS #: 161735-79-1 Purity: >99% (HPLC); NMR (Conforms) Molecular Formula: C12H13N • CH3SO3H. Molecular Weight: 267.3 g/mol.

#### Baicalein (Cat No. SIH-579)

A xanthine oxidase inhibitor that is known to inhibit the formation of alpha-synuclein fibrils

CAS #: 491-67-8 Purity:≥98% (TLC); NMR (Conforms) Molecular Formula: C15H10O5. Molecular Weight: 270.24 g/mol.



Chemical structure of Rasagiline mesylate (SIH-577), a MAO Inhibitor. CAS #: 161735-79-1.



Chemical structure of Baicalein (SIH-579), a Lipoxygenase inhibitor. CAS #: 491-67-8.



Toronto Research Chemicals, TRC was founded in 1982 to manufacture and supply researchers in the biomedical fields with specialised complex organic small molecules not otherwise commercially available. Today, Toronto Research Chemicals Inc. employs more than 300 full-time staff, of which approximately 200 are PhD's and MSc's, operating in 120,000 square feet of facilities, including 15 production laboratories, in Toronto, Canada. TRC currently offers an extensive catalogue more than 200,000 products with an extensive inventory for immediate shipment. Where stock is unavailable, TRC will undertake production of new and known compounds upon customer order. Toronto Research Chemicals supports the global scientific community across more than 105 countries.

#### Why Choose Toronto Research Chemicals?

- Specialized in providing high-quality biochemicals in custom pack sizes to satisfy any quantity required.
- Distribute to companies worldwide, usually, providing overnight delivery in North America via Federal Express.
- We also offer alternative carrier options to meet worldwide delivery and special import requirements as well as dangerous goods.
- A dedicated professional customer service team positioned to ensure customer satisfaction and technical support.

#### ION Channel Research

TRC offers a large selection of standards, labeled isotopes, metabolites & impurities covering both voltage & ligand-gated ion channels to aid your research.



#### **Chloride Channel Modulators**

**Ani9** - Cat. No: C587790 Ani9 is a potent and highly selective anoctamin1 (ANO1)/transmembrane protein 16A (TMEM16A) inhibitor that completely inhibited ANO1 chloride current with submicromolar potency

Kinases are important in numerous biological processes including; signaling, metabolism, and transport among many others. Our extensive catalog (200,000+ products) provides you with the ideal compound collection for kinase research, including inhibitors, activators, agonists, modulators, selective antibodies, and related ELISA kits.

We offer unique tools to help you uncover the function of the wide range of protein kinases and elucidate their role in numerous diseases.

#### AGC Group

Akt/ PKB I MSK I PDK1 I PKA I PKC I PKG I ROCK I RSK I SGK Ingenol 3,20-Dibenzoate - Cat. No: I655833 An activator of protein kinase C (PKC) and apoptotic inducer

#### **CAMK Group**

AMPK I CaMKII I Chk I DAPK I MK2 I MLCK I NUAK I PKD I STK33 **Cryptotanshinone** - Cat. No: C827480 An inhibitor of oncogenic protein tyrosine phosphatase SHP2; AMPK activator



Cat. No: C827480

#### CMGC Group

Cdk | CK2 | DYRK | ERK | GSK-3 | JNK | p38 | SRPK **Olomoucine** - Cat. No: O567000 A purine derivative which inhibits cyclin-dependent kinases and induces G1 arrest; potent Cdk inhibitor

**TK Group** Abl I Ack I ALK I BTK I EFGR I FAK I FGFR I ITK I PDGFR I VEGFR **Bosutinib** - Cat. No: B676095 A novel dual Abl/Src kinase inhibitor, suppresses migration and invasion of human breast cancer cells

#### **TKL Group**

BMP I LIMK I LRRK2 I Raf I RIPK1 I TAK1 I TGF-β Alantolactone - Cat. No: A173715 Antiproliferative; induces activin/SMAD3 signaling

Me  $CH_2$ Me

Cat. No: A173715

#### Atypical & Lipid Kinases

ATM/ATR I DNA-PK I eEF-2 I mTOR I CerK I DGK I SphK **PP 242** - Cat. No: P698930 Used in leukemia therapy suppressing mTOR signaling; dual mTORC1/C2 inhibitor Biomarkers provide a dynamic approach to understand the spectrum of numerous disease with applications in pharmacology, observational & analytic epidemiology, preclinical & clinical trials, screening, diagnosis, and prognosis. TRC offers a large selection of these biomarkers along with their labeled analogs to aid your research.

Neurodegeneration S-(5'-Adenosyl)-L-homocysteine - Catalog No: A291500 A novel biomarker for predicting the susceptibility of a subject to a mental or neurodegenerative disorder

Hepatotoxicity 2-Stearoyl-rac-glycerol - Catalog No: S686570 A biomarker of metabolic responses to hepatotoxicants

NH<sub>2</sub> Catalog No: A291500 NH<sub>2</sub> OH OH



Fatty liver disease Glutathione Dimethyl Ester Disulfide Dihydrochloride - Catalog No: G597975 A glutathione disulfide derivative; a biomarker for fatty liver disease

**Inflammation & Cancer** 8-Nitroguanine - Catalog No: N496010 A potential biomarker for progression of malignant fibrous histiocytoma, a model of inflammation-related cancer



Catalog No: N496010

Osteoarthritis 1-Eicosapentaenoyl-sn-glycerol-3-phosphocholine - Catalog No: E477880 A possible molecular biomarker for the early detection of osteoarthritis

Labeled biomarkers NSC 203800-d5 - Catalog No: P306502 Used as labeled biomarker for metabolic age



Catalog No: P306502

Catalog No: S686570



# Building blocks are the basic components for organic synthesis. We offer a unique collection of these molecules including functionalized heterocycles, halogenated compounds, alkynes, azides, and fluorinated compounds.

TRC also offers custom chemical synthesis, from the first-time synthesis of complex and commercially not available compounds to the optimization of synthetic routes and scale up chemistry.

#### **Heterocyclic Building Blocks**

2-Bromo-4,5-dichloro-1h-imidazole - Cat. No: B691098

- A halogenated imidazole derivative that can be prepared via bromination of 4,5-dichloroimidazole using bromine
- Used in the synthesis of 1-methoxymethyl-2-bromo-4,5-dichloroimidazole, which shows potent insecticidal activity

#### 2-Mercaptopyrimidine - Cat. No: M225505

- Used to study the highly selective palladium catalyzed kinetic resolutions of the racemic cyclic allylic carbonates
- Used to study the photodegradation of 2-pyrimidinethiol in aerated aqueous solution using zinc oxide

#### **Organic Building Blocks**

- 1,4-Diiodooctafluorobutane Cat. No: D492503
- Used as a guest molecule to prepare a chiral bidentate inclusion complex with pyridyl moieties
- Employed in the synthesis of three-component supramolecular complexes

#### 2-Bromo-1,10-phenanthroline - Cat. No: B635380

• Can be synthesized using a two-step protocol through N-Oxide formation using m-CBPA and bromination using TBAB and p-Toluenesulfonic anhydride

#### **Fluorinated Building Blocks**

(2,3-Difluorophenyl)thiourea - Cat. No: D448963

Fluorinated Building Block

#### [2-(2,4-Difluorophenyl)ethynyl]trimethylsilane - Cat. No: D448938

• Fluorinated Building Block

#### **Epigenetics Research**

Recent new data and knowledge relating to the importance of epigenetics in different human disorders promise a vibrant future for epigenetics research. Our extensive catalog (200,000+ products) provides you with the ideal compound collection for your research, including inhibitors, activators, agonists, modulators, selective antibodies, and related ELISA kits.

Products for Epigenetic Writers JAK Kinase

**Tyrphostin B42** - Cat. No: T947955

- Inhibitor of JAK2 3/STAT, JAK3/AP-1 & JAK3/MAPK pathways
- Selective inhibitor of EGF receptor tyrosine kinase

#### Pim Kinase

Pim-1 Inhibitor 2 - Cat. No: P446710

Potent Pim-1 kinase inhibitor



Ο N Ν Н HO OH

Catalog No: T947955





Bachem's catalog stood at the beginning of the Bachem success story: being the first to offer building blocks to customers has irrevocably positioned Bachem as the leading manufacturer of biochemicals and peptides. Ever since, we continuously expand the range of products offered in our catalog, providing customers with a palette of peptides and biochemicals like no other supplier.

We offer a large selection of research biochemicals from stock. Our distribution centers in the US and in Europe allow fast delivery worldwide. With a track record in custom synthesis projects, we are a partner to our clients as a trusted supplier of high quality research peptides and amino acids.

Our catalog consists of over 6500 products and more almost half of them are amino acid derivatives and biochemicals.

We offer a large spectrum of biochemicals, such as:

- Inhibitors and/or substrates for almost 400 different enzymes
- Over 50 different Lipids and Phospholipids
- Platelet-activating factor (PAF) and its derivatives
- More than 20 non-ionic detergents
- A wide array of fluorescently labelled as well as indigogenic enzyme substrates

The quality of our products is evidenced in the detailed analytical datasheets, which come with each of our products.



# BIOMOLECULE LABELING & CONJUGATION

Baseclick offers most efficient and reliable labeling products based on its perfected and proprietary bioconjugation concept - click chemistry. As leading pioneer in high-end nucleic acid modification, they understand themselves as transformative enabler for the development of new and value added applications, e.g. single-molecule NGS sequencing, best-in-class cell proliferation tests, engineered mRNA,...

Their high-end nucleic acid modification and bioconjugation platform opens the door to accelerated innovation of superior tools, automated read-outs, kits & reagents.

# Large Portfolio of **BIOCONJUGATION** Reagents:

As the reaction is only depending on the azide and alkyne partners and precursors are easily made available, theoretically there is **no limitation** in the **functional moiety** to be attached. At the moment we offer:



## REGENTS & KITS for LABELED AND FUNCTIONAL mRNA

- Prepare dye-labeled mRNA
- Track and localize mRNA in cell culture
- Quantify mRNA transfection performance

#### \star Dyes,

- ★ Triphosphates,
- Click Chemistry Reagents,
- ★ Fatty acids & carbohydrates,
- ★ Amino Acids & peptides,
- ★ Phosphoramidites & Nucleotides, etc... with click-ready functional groups.
- Assuring and testing biocompatibility of modified constructs
- Assessing mRNA biodistribution

#### TTT-mRNA prep Kits: The ALL-IN-ONE Gene Messenger Kit

ALL-IN-ONE Kit for transcription, purification, labeling, transfection & tracking of mRNA. It is the ideal complete tool for biodistribution studies in mRNA research and drug development.

#### Modifications, Transfection & Purification

Baseclick is offering a range of RNA modifiers, a kit for efficient purification of labeled mRNA as well as a kit for transfecting modified mRNA.





ChemScene supplies over 5,000 bioactive molecules used in the study of cell signaling pathways, almost 1,000 building blocks and over 3,000 intermediates.

Imagine the power of people with a common purpose building relationships that create value for you and your business. This is ChemScene. Every day, our people work with you to build the value you are looking for. We make sure everything we do honors that relationship from our commitment to the highest quality chemicals in the world, to the way we engage with our customers and communities to do business responsibly.

#### Why Choose ChemScene?

#### Quality

We always pay attention to quality control. Strict quality control policies enable us to provide quality chemicals to our customers with the highest degree of confidence. This is the key to our success. ChemScene makes all chemical test data available to our clients, including HNMR, LC-MS and HPLC data, while also detailing the stability and activity of each product.

#### Expertise

Our chemists are highly experienced in preparing biologically active molecules that are both structurally and synthetically diverse. Our products are available in quantities ranging in scale from milligrams to kilograms. Our customers come from diverse and prestigious backgrounds including pharmaceutical and biotech companies, universities, research institutions around the world.

#### Dedication

Our primary motivation at ChemScene has always been to provide most innovative life science reagents for a low price, to help scientists conduct high quality research with the goal of producing significant discoveries that revolutionize scientific thinking. We are committed to delivering the latest innovations in bioactive molecules and making our products available at reasonable expenses, while ensuring customer satisfaction with all of our products and services.

Cancer	Enzalutamide	MG-132	MLN4924	BIBF 1120	GSK126	SCH772984
	Everolimus	(+)-JQ-1	Cilengitide	Trametinib	Olaparib	Palbociclib
	Dasatinib	AZD-9291	PCI-32765	Z-VAD-FMK	GSK 525762A	BMN-673
	Selumetinib	Y-27632	OTX-015	OTSSP167	Vemurafenib	Afatinib
	Bortezomib	LY294002	Cobimetinib	U0126	Cobimetinib	GDC-0032
	Monomethyl auristati	n E				
Cardiovascular Disease	SEA0400	Riociguat	Apixaban	Rivaroxaban	Istaroxime	AVE 0991
	Macitentan	Bosentan	Cinaciguat	Darapladib	5-R-Rivaroxaban	PD 123319
	Vernakalant	Sitaxsentan	AHU-377	Mibefradil	20-HETE	NS-304
	Dabigatran etexilate					
Endocrinology	Forskolin	INT-777	Ivacaftor	Ibutamoren	Pasireotide	Ulipristal
	Mifepristone	Silodosin	TAK-438	DHEA	Etonogestrel	Cabergoline
	Tanaproget	MSI-1436	Dienogest	Pasireotide	VX-809	
Infection	Simeprevir	Dolutegravir	PSI-7977	Telaprevir	Asunaprevir	Boceprevir
	Ledipasvir	Letermovir	Cobicistat	BMS-626529	Rilpivirine	Elvitegravir
	Entecavir	Ritonavir	Emtricitabine	Ribavirin	Tenofovir	Lamivudine
	Adefovir dipivoxil	Efavirenz	Lopinavir			
Metabolic Disease	TAK-875	MK-8245	Lorcaserin	CHIR-99021	GW 4064	Ipragliflozin
	Canagliflozin	Maxacalcitol	LX-4211	EMD638683	Lesinurad	Alfacalcidol
	Sobetirome	Ranirestat	Dapagliflozin	LCQ-908	Odanacatib	Pioglitazone
	PTC124	Rosiglitazone				
Neurological Disease	DAPT	Suvorexant	Clozapine	PF-04447943	Tonabersat	PF-3084014
	EVP-6124	LY-411575	Istradefylline	MK-3207	Bay 60-7550	Galanthamine
	BMS-927711	Opicapone	Lu AE58054	Cebranopadol	Pitolisant	Brexpiprazole
	Brivaracetam	Vortioxetine	LX1606	SKF-82958		
Inflammation/Immunology	TAK-242	SB 203580	ST 2825	Reparixin	Calcipotriol	HG-9-91-01
	Ruxolitinib	Talarozole	Baricitinib	AM966	Tacrolimus	GS-9620
	CC-930	Resiquimod	Umeclidinium	BMS-509744	Ki20227	Vilanterol
	RN486	Calcipotriol	MCC950	Teriflunomide		
1						

#### **Disease Related Products**

#### Inhibitors

- Building Blocks
- Intermediates
- Disease Related Products
- Vitamin D Related Products
- Natural Products
- Antibody-Drug Conjugate Related Products



Larodan makes a comprehensive range of research grade lipids for use as reference standards and reagents with customers all over the world. Our facilities are located at the Karolinska Institute in Stockholm, Sweden.

 Fatty acids
 | Fatty acid methyl esters | Carnitines | Coenzyme A and CoA esters | Wax

 Esters
 | Fatty Alcohols | Saturated Hydrocarbons | Oxylipins | Octadecanoids | Eicosanoids

 | Prostaglandins | Glycerides | Monoglycerides | Diglycerides | Triglycerides | Single

 and mixed fatty acids | Phospholipids | Natural and Synthetic | PC | PG | PE | PS | PI

 | Sphingolipids | Sphingosines | Ceramides | Phosphosphingolipids | Spingomyelins |

 Glycosphingolipids | Cerebrosides | Sulfatides | Gangliosides | Sterols | Polyprenols and Dolichols |

 Polyprenyl Phosphate | MCPD | Glycines



# **Quality at the best price!**

4 pipette bundle pack : (0.1 – 2 μl / 2 – 20 μl / 20 – 200 μl / 100 – 1000 μl) Article no: ABM-B254

The Single Channel Pipettors are affordable lightweight instruments which offer high precision and accuracy:

- Thumb-friendly spring system
- · Colour-coded labeling system to distinguish capacity volume ranges
- · Easy calibration without the need of special tools
- · Comfortable and lightweight to reduce hand strain
- Able to pipette liquids of varying densities

BIOZOI

FIT FOR SCIENCE



BIOZOL Diagnostica Vertrieb GmbH Obere Hauptstrasse 10b 85386 Eching, Germany

Telephone: +49-89-37 99 666-6 Fax: +49-89-37 99 666-99 E-Mail: info@biozol.de

Freecall Telefon 08000-BIOZOL (i.e. 0800-024 69 65)