

Neurochemicals

Newsletter 09/2010 - New Products for Neuroscience Research

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- BS0283 XAV 939 - Tankyrase (TNKS) inhibitor
- BS0284 DR2313 - Potent, brain-penetrant PARP inhibitor

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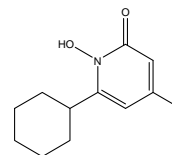
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Ciclopirox

Cat. No.	Size	Price
BG0571	100 mg	75 €

6-Cyclohexyl-1-hydroxy-4-methylpyridin-2(1H)-one; CPX; Batrafen; Loprox
M.W. 207.27 C₁₂H₁₇NO₂ [29342-05-0] Store at RT
Soluble to 100 mM in ethanol or to 100 mM in DMSO

A synthetic antifungal agent for topical dermatologic treatment of superficial mycoses. It acts by inhibiting the membrane transfer system by interrupting the Na⁺/K⁺-ATPase. It also inhibits tumour growth in human breast cancer MDA-MB-231 xenografts.



Reference

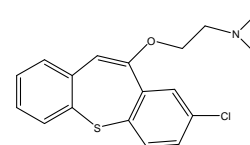
1. Niewerth et al. (2003) *Antimicrob Agents Chemother* 47:1805; 2. Zhou et al. (2010) *Int J Cancer* 2010 Mar 11. [Epub ahead of print]

Zotepine

Cat. No.	Size	Price
BG0572	10 mg	99 €

2-[(8-Chlorodibenzo(b, f)thiepin-10-yl)oxy]-N,N-dimethylethanamine; Nipolept
M.W. 331.86 C₁₈H₁₈ClNOS [26615-21-4] Store at RT
Soluble to 100 mM in ethanol or to 100 mM in DMSO

An atypical antipsychotic agent. Its antipsychotic effect is thought to be mediated through antagonist activity at dopamine and serotonin receptors. It has a high affinity for dopamine D₁ and D₂ receptors. It also affects the 5-HT_{2A}, 5-HT_{2C}, 5-HT₆, and 5-HT₇ receptors. In addition, it acts as a norepinephrine reuptake inhibitor.



Reference

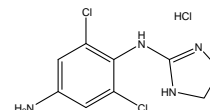
1. DeSilva et al. (2006) *Cochrane Database Syst Rev* Oct 18; (4):CD001948; 2. Komossa et al. (2010) *Cochrane Database Syst Rev* Jan 20; (1):CD006628

p-Aminoclonidine hydrochloride

Cat. No.	Size	Price
BG0575	10 mg	180 €

2-(4-Amino-2,6-dichloroanilino)-2-imidazoline hydrochloride; Apraclonidine; ALO 2145
M.W. 281.57 C₉H₁₀Cl₂N₄ .HCl [73218-79-8] Store at +4° C
Soluble to 100 mM in ethanol or to 100 mM in DMSO

α-Adrenergic agonist and structural analogue of clonidine (Cat. No. BG0151). It is used for treatment of post-surgical elevated intraocular pressure.



Reference

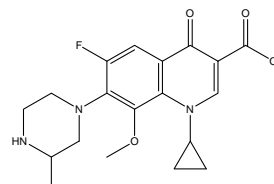
1. Sciscio and Casswell (2001) *Br J Ophthalmol* 85:164; 2. Wright and Freedman (2009) *J Glaucoma* 18:395

Gatifloxacin

Cat. No.	Size	Price
BG0576	100 mg	45 €

1-Cyclopropyl-6-fluoro-1,4-dihydro-8-methoxy-7-(3-methyl-1-piperazinyl)-4-oxo-3-quinolinecarboxylic acid; AM 1155; Gatiflo; Tequin; Zymar
M.W. 375.39 C₁₉H₂₂FN₃O₄ [112811-59-3] Store at +4° C
Soluble to 10 mM in DMSO or in ethanol

An antibiotic of the fourth-generation fluoroquinolone family, inhibits the bacterial enzymes DNA gyrase (IC₅₀ = 13.8 µg/ml) and topoisomerase IV (IC₅₀ = 0.11 µg/ml).



Reference

1. Takei et al. (1998) *Antimicrob Agents Chemother* 42:2678; 2. Fukuda et al. (1998) *Antimicrob Agents Chemother* 42:1917

Meropenem

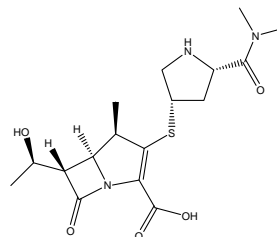
Cat. No.	Size	Price
BG0577	100 mg	270 €

(4R,5S,6S)-3-[(2S,5S)-5-(Dimethylcarbamoyl)pyrrolidin-2-yl]sulfanyl-6-(1-hydroxyethyl)-4-methyl-7-oxo-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid; Merrem; Meronem

M.W. 383.46 C₁₇H₂₅N₃O₅S [96036-03-2] Store at +4° C

Soluble to 50 mM in DMSO or in ethanol

Ultra-broad spectrum injectable antibiotic used to treat a wide variety of infections, including meningitis and pneumonia. It inhibits bacterial wall synthesis like other β-lactam antibiotics. But in contrast to other β-lactams, it is highly resistant to degradation by β-lactamases or cephalosporinases.



Reference

1. Baldwin et al. (2008) *Drugs* 68:803; 2. Bharti et al. (2010) *J Anaesth Clin Pharmacol* 26:99

Niclosamide

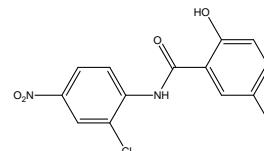
Cat. No.	Size	Price
BG0578	100 mg	85 €

2',5-Dichloro-4'-nitrosalicylanilide; Niclocide

M.W. 327.12 C₁₃H₈Cl₂N₂O₄ [50-65-7] Store at RT

Soluble to 50 mM in DMSO or in ethanol

An antihelminthic agent, used for the treatment of tapeworm. It inhibits Wnt/Frizzled1 signaling by promoting Frizzled1 endocytosis, downregulating Dishevelled-2 protein, and it inhibits Wnt3A-stimulated β-catenin stabilization and LEF/TCF reporter activity.



Reference

1. Chen et al. (2009) *Biochemistry* 48:10267; 2. Chen et al. (2010) *Am J Physiol Gastrointest Liver Physiol* 299:G293

Cidofovir

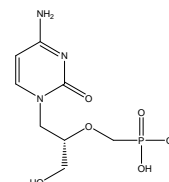
Cat. No.	Size	Price
BG0579	50 mg	220 €

(S)-1-[3-Hydroxy-2-(phosphonylmethoxy)propyl]cytosine; Cidofovir; HPMP; Vistide; (S)-HPMP

M.W. 279.19 C₈H₁₄N₃O₆P [113852-37-2] Desiccate at RT

Soluble to 100 mM in ethanol or to 100 mM in DMSO

Antiviral agent. It suppresses CMV replication by selective inhibition of viral DNA polymerase and therefore prevention of viral replication and transcription. A injectable antiviral medication for the treatment of cytomegalovirus (CMV) retinitis in patients with AIDS.



Reference

1. Zabawski (2000) *Dermatol Online J* 6:3; 2. Donne et al. (2009) *Antivir Ther* 14:939

Anastrozole

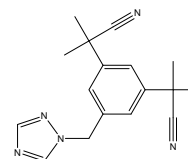
Cat. No.	Size	Price
BG0580	25 mg	140 €

2-[3-(1-Cyano-1-methyl-ethyl)-5-(1H-1,2,4-triazol-1-ylmethyl)phenyl]-2-methyl-propanenitrile; ZD1033; Arimidex

M.W. 293.37 C₁₇H₁₉N₅ [120511-73-1] Store at RT

Soluble to 100 mM in ethanol or to 100 mM in DMSO

Antitumour agent. Potent, selective aromatase inhibitor (IC₅₀ = 15 nM) that reduces plasma estrogen levels. Some breast cancer cells require estrogen to grow, and eliminating estrogen suppresses their growth.



Reference

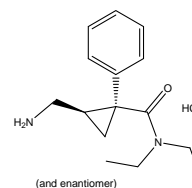
1. Dukes et al. (1996) *J Steroid Biochem Mol Biol* 58:439; 2. Goss and Tye (1997) *Oncology* 11:1697; 3. Buzdar (2001) *Br J Cancer* 85:6; 4. Needleman and Tobias (2008) *Expert Rev Anticancer Ther* 8:1871

Milnacipran hydrochloride

Cat. No. **BG0581** Size **10 mg** Price **74 €**

(1*R**,2*S**)-2-(Aminomethyl)-*N,N*-diethyl-1-phenylcyclopropanecarboxamide hydrochloride; *Ixel*; *Savella*; F 2207
M.W. 282.81 C₁₅H₂₂N₂O .HCl [101152-94-7] Store at +4° C
Soluble to 100 mM in water or to 100 mM in DMSO

Antidepressant agent. Neuronal noradrenaline and 5-HT reuptake inhibitor (SNRI) (IC₅₀ values are 100 nM and 203 nM respectively). It displays no affinity at a range of other receptors and is used for the treatment of clinical depression and fibromyalgia.



Reference

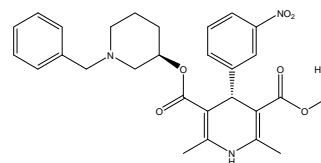
1. Moret et al. (1985) *Neuropharmacology* 24:1211; 2. Maj et al. (2000) *J Neural Transm* 107:1345; 3. Suzuki et al. (2008) *Anesth Analg* 106:1309; 4. Kranzler and Gendreau (2010) *Neuropsychiatr Dis Treat* 6:197

Benidipine hydrochloride

Cat. No. **BG0582** Size **10 mg** Price **109 €**

1,4-Dihydro-2,6-dimethyl-4-(3-nitrophenyl)-3,5-pyridinedicarboxylic acid 3-Methyl 5-[(3*R*)-1-(Phenylmethyl)-3-piperidinyl] ester hydrochloride; *Coniel*; *Capadipine*; *KW 3049*; *Nacadipine*
M.W. 542.02 C₂₈H₃₁N₃O₆ .HCl [91599-74-5] Desiccate at +4° C
Soluble to 10 mM in ethanol or to 75 mM in DMSO

1,4-Dihydropyridine-type Ca²⁺ L-/N- and T-type channel blocker. Antihypertensive agent. It acts also as an antagonist at mineralocorticoid receptors.



Reference

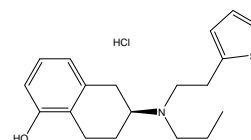
1. Yao et al. (2006) *J Pharmacol Sci* 100:243; 2. Kosaka et al. (2010) *Eur J Pharmacol* 635:49; 3. Nishizawa et al. (2010) *J Hypertens* 28:1515

Rotigotine hydrochloride

Cat. No. **BG0583** Size **25 mg** Price **190 €**

(6*S*)-5,6,7,8-Tetrahydro-6-[propyl[2-(2-thienyl)ethyl]amino]-1-naphthalenol hydrochloride; *N 0923*
M.W. 351.93 C₁₉H₂₅NOS .HCl [125572-93-2] Desiccate at +4° C
Soluble to 10 mM in water or to 100 mM in DMSO

Dopamine D₂/D₃ receptor agonist (K_i = 13 nM, D₂ receptor and 0.71 nM, D₃ receptor). It has significant affinity for 5-HT_{1A} and adrenergic α_{2B} receptors. It is indicated for the treatment of Parkinson's disease (PD) and restless legs syndrome (RLS).



Reference

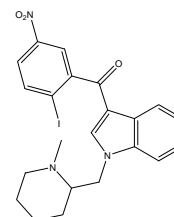
1. Belluzzi et al. (2004) *Mov Disord* 9:147; 2. Scheller et al. (2009) *Naunyn-Schmiedeberg's Arch Pharmacol* 379:73; 3. Chen et al. (2009) *Pharmacotherapy* 29:1452

AM 1241

Cat. No. **BN0783** Size **5 mg** Price **150 €**

(2-Iodo-5-nitrophenyl)-(1-(1-methylpiperidin-2-ylmethyl)-1*H*-indol-3-yl)methanone; *AM1241*
M.W. 503.33 C₂₂H₂₂IN₃O₃ [444912-48-5] Store at -20° C
Soluble to 10 mM in ethanol or to 50 mM in DMSO

Selective and potent cannabinoid CB₂ receptor agonist (K_i value of 2 nM, > 100-fold selectivity over the cannabinoid CB₁ receptor *in vitro*). It prolongs survival in a transgenic mouse model of amyotrophic lateral sclerosis when initiated at symptom onset.



Reference

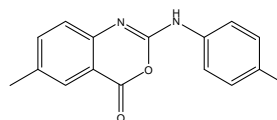
1. Malan et al. (2001) *Pain* 93:239; 2. Shoemaker et al. (2007) *J Neurochem* 101:87

URB 754

Cat. No.	Size	Price
BN0784	10 mg	75 €

6-Methyl-2-[(4-methylphenyl)amino]-1-benzoxazin-4-one
M.W. 266.29 C₁₆H₁₄N₂O₂ [86672-58-4] Store at -20° C
Soluble to 20 mM in ethanol or to 100 mM in DMSO

Rat brain fatty acid amidohydrolase (FAAH) inhibitor (IC₅₀ = 32 μM), it binds weakly to the rat cannabinoid CB₁ receptor (IC₅₀ = 3.8 μM). Also a noncompetitive inhibitor of monoacylglycerol lipase (MAGL), exhibiting an IC₅₀ of 200 nM for the recombinant rat brain enzyme. Data from other labs indicates that it does not inhibit rec. human MAGL, nor rat- or mouse-brain MAGL at concentrations up to 100 μM. It does not inhibit COX-1 or COX-2 at concentrations up to 100 μM.



Reference

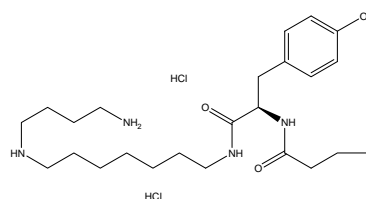
1. Stella et al. (1997) *Nature* 388:773; 2. Dinh et al. (2002) *Proc Natl Acad Sci USA* 99:10819; 3. Makara et al. (2005) *Nat Neurosci* 8:1139; 4. Hohmann et al. (2005) *Nature* 435:1108

Philanthotoxin-7,4

Cat. No.	Size	Price
BN0785	10 mg	130 €

(S)-N-[7-[(4-Aminobutyl)amino]heptyl]-4-hydroxy-α-[(1-oxobutyl)amino]benzenepropanamide dihydrochloride
M.W. 507.54 C₂₄H₄₇N₄O₃ ·2HCl [401601-12-5] Desiccate at RT
Soluble to 100 mM in DMSO or to 100 mM in water

A subtype-selective, use-dependent inhibitor of native AMPA receptors. Inhibits GluR1/2, with little activity at GluR2/3.



Reference

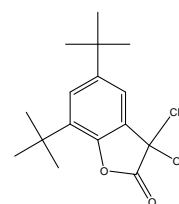
1. Nilsen et al. (2007) *J Am Chem Soc* 129:4902

rac BHFF

Cat. No.	Size	Price
BN0786	10 mg	90 €

5,7-Bis(1,1-Dimethylethyl)-3-hydroxy-3-(trifluoromethyl)-2(3H)-benzofuranone; rac-BHFF
M.W. 330.34 C₁₇H₂₁F₃O₃ [123557-91-5] Desiccate at +4° C
Soluble to 100 mM in DMSO or to 100 mM in ethanol

Selective and potent positive allosteric modulator (PAM) at GABA_B receptors that increases the potency and efficacy of GABA (> 15-fold and > 149% respectively). Displays anxiolytic activity *in vivo* and is orally active.



Reference

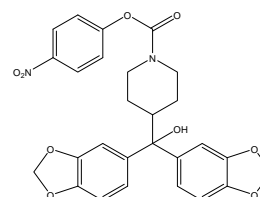
1. Malherbe et al. (2008) *Br J Pharmacol* 154:797; 2. Maccioni et al. (2010) *Drug Alcohol Depend* 109:96

JZL 184

Cat. No.	Size	Price
BN0787	10 mg	90 €

4-Nitrophenyl-4-(dibenzo[d][1,3]dioxol-5-yl(hydroxy)methyl)piperidine-1-carboxylate
M.W. 520.49 C₂₇H₂₄N₂O₉ [1101854-58-3] Store at -20° C
Soluble to 25 mg/ml in DMSO or to 10 mg/ml in ethanol

Potent, selective monoacylglycerol lipase (MAGL) inhibitor (IC₅₀ = 8 nM; murine brain membranes) and moderate fatty acid amide hydrolase (FAAH) inhibitor (IC₅₀ = 4 μM; murine brain membranes).



Reference

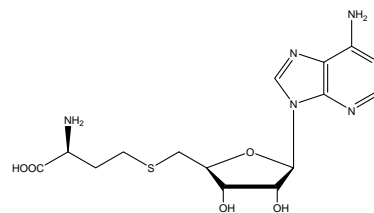
1. Long et al. (2009) *Nat Chem Biol* 5:37

S-Adenosylhomocysteine

Cat. No. **BN0789** Size **50 mg** Price **175 €**

S-(5'-Deoxyadenosin-5'-yl)-L-homocysteine; SAH; AdoHcy
M.W. 384.41 C₁₄H₂₀N₆O₅S [979-92-0] Store at -20° C
Soluble to 20 mg/ml in 1N HCl or in DMSO

An intermediate and modulator of several metabolic pathways (e.g. activated methyl cycle and cysteine biosynthesis). It is also a product of S-adenosyl-methionine (SAM)-dependent methylation of DNA, RNA, histones and other proteins. A risk factor for many diseases, including cancer and neurodegenerative diseases. Inhibitors that block its hydrolysis are being developed as anti-viral, anti-parasitic, anti-arthritic and immunosuppressive agents.



Reference

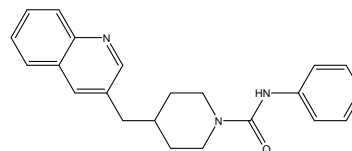
1. Wagner and Koury (2007) *Am J Clin Nutr* 86:1581; 2. Liu et al. (2009) *J Biochem Mol Toxicol* 23:349

PF 750

Cat. No. **BN0790** Size **10 mg** Price **155 €**

N-Phenyl-4-(quinolin-2-ylmethyl)piperidine-1-carboxamide; PF-750
M.W. 345.44 C₂₂H₂₃N₃O [959151-50-9] Store at RT
Soluble to 100 mM in DMSO or to 100 mM in ethanol

Selective and potent irreversible fatty acid amide hydrolase (FAAH) inhibitor (IC₅₀ = 16.2 nM) displaying no activity at a range of other serine hydrolases. Orally active.



Reference

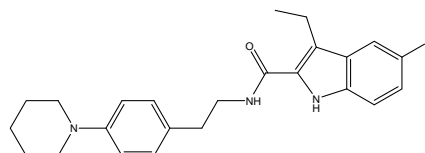
1. Ahn et al. (2007) *Biochemistry* 46:13019; 2. Mileni et al. (2008) *Proc Natl Acad Sci USA* 105:12820

Org 27569

Cat. No. **BN0791** Size **10 mg** Price **110 €**

5-Chloro-3-ethyl-N-[2-[4-(1-piperidinyl)phenyl]ethyl]-1H-indole-2-carboxamide; Org-27569
M.W. 409.95 C₂₄H₂₈ClN₃O [868273-06-7] Store at RT
Soluble to 50 mM in DMSO or in ethanol

Potent allosteric modulator at CB₁ receptors (pEC₅₀ = 8.24). Significantly increases binding of the CB₁ agonist [³H]CP 55,940 (pK_b = 5.67) and decreases binding of the CB₁ inverse agonist [³H]SR 141716A (pK_b = 5.95).



Reference

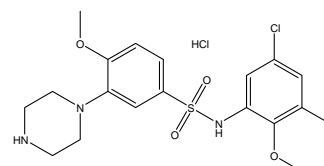
1. Price et al. (2005) *Mol Pharmacol* 68:1484; 2. Ross (2007) *Trends Pharmacol Sci* 28:567

SB 399885 hydrochloride

Cat. No. **BN0792** Size **10 mg** Price **135 €**

N-(3,5-Dichloro-2-methoxy-phenyl)-4-methoxy-3-piperazin-1-yl-benzenesulfonamide hydrochloride
M.W. 482.81 C₁₈H₂₁Cl₂N₃O₄S .HCl [402713-80-8] Desiccate at RT
Soluble to 100 mM in DMSO or to 100 mM in water

Selective, potent 5-HT₆ receptor antagonist. Displays > 200-fold selectivity for 5-HT₆ over other 5-HT receptors (K_i values are 0.77, 1.00 and 0.95 nM for human recombinant, native rat and native human 5-HT₆ receptors respectively). Brain penetrant and orally active agent.



Reference

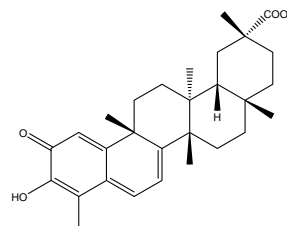
1. Hirst et al. (2006) *Eur J Pharm* 553:109; 2. Wesolowska and Nikiforuk (2007) *Neuropharmacology* 52:1274; 3. Foley et al. (2008) *Neuropharmacology* 54:1166

Celastrol

Cat. No.	Size	Price
BN0793	10 mg	142 €

3-Hydroxy-9 β ,13 α -dimethyl-2-oxo-24,25,26-trinoroleana-1(10),3,5,7-tetraen-29-oic acid
M.W. 450.61 C₂₉H₃₈O₄ [34157-83-0] Desiccate at -20° C
Soluble to 10 mg/ml in ethanol or to 10 mg/ml in DMSO

A triterpenoid antioxidant compound isolated from the Chinese Thunder of God vine (*T. wilfordii*). Displays an IC₅₀ value of 7 μ M (isolated rat liver assay of lipid peroxidation), equivalent to about 15 times the antioxidant potency of α -Tocopherol (Cat. No. BG0051). Also inhibits topoisomerase II activity *in vitro* (IC₅₀ = 7.41 μ M). A potent proteasome inhibitor, that suppresses human prostate cancer growth in nude mice. It potentiates TNF-induced apoptosis and suppresses invasion of tumour cells by inhibiting NF- κ B-regulated gene products and TAK1-mediated NF- κ B activation.



Reference

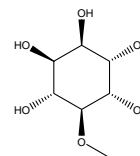
1. Sassa et al. (1990) *Biochem Biophys Res Commun* 172:890; 2. Yang et al. (2006) *Cancer Res* 66:4758; 3. Nagase et al. (2007) *Biosci Biotechnol Biochem* 67:1883; 4. Sethi et al. (2007) *Blood* 109:2727

D-Pinitol

Cat. No.	Size	Price
BN0794	100 mg	85 €

3-O-Methyl-D-chiro-inositol; Pinitol; Sennitol
M.W. 194.18 C₇H₁₄O₆ [10284-63-6] Store at +4° C
Soluble in water or ethanol

An anti-diabetic agent isolated from *Sutherlandia frutescens* leaves. Precursor to biologically active fluorinated isosteres of inositol, which show cell growth inhibitory properties.



Reference

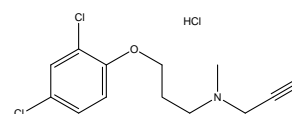
1. Narayanan et al. (1987) *Curr Sci* 56:139; 2. Kozikowski et al. (1990) *J Am Chem Soc* 112:4528; 3. Thomas and Bohnert (1993) *Plant Physiol* 103:1299

Clorgyline hydrochloride

Cat. No.	Size	Price
BN0795	50 mg	95 €

N-Methyl-N-propargyl-3-(2,4-dichlorophenoxy)propylamine hydrochloride
M.W. 308.63 C₁₃H₁₅Cl₂NO .HCl [17780-75-5] Store at RT
Soluble to 50 mg/ml in water

An irreversible and selective inhibitor of monoamine oxidase A (MAO-A) (IC₅₀ value = 1.2 nM).



Reference

1. O'Brien et al. (1994) *J Neural Transm Suppl* 41:295; 2. Geha et al. (2001) *J Biol Chem* 276:9877

Gliadorphin-7

Cat. No.	Size	Price
BP0399	5 mg	99 €

GD-7; Prolamin (43-49); α/β -Gliadin (43-49); Gluteomorphin
M.W. 875.97 C₄₃H₅₇N₉O₁₁ [107936-65-2] Desiccate at -20° C
Soluble in water

An opioid peptide which is formed during digestion of the gliadin component of the gluten protein. Elevated concentrations of gliadorphin-7, due to insufficient proteolysis, has been associated with autism, schizophrenia, and celiac disease.

H-Tyr-Pro-Gln-Pro-Gln-Pro-Phe-OH

Reference

1. Graf et al. (1987) *Neuropeptides* 9:113; 2. Payan et al. (1987) *Life Sci* 40:1229; 3. Hollosi et al. (1990) *Neuropeptides* 17:111; 4. Sun and Cade (2003) *Peptides* 24:321

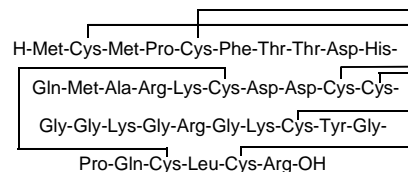
Chlorotoxin

Cat. No.	Size	Price
BP0400	100 µg	175 €

Cltx

M.W. 3995.7 C₁₅₈H₂₄₉N₅₃O₄₇S₁₁ [163515-35-3] Desiccate at -20° C
Soluble in water

A small conductance chloride channel blocker. It is originally isolated from *Leiurus quinquestriatus* scorpion venom. A new interesting tool in cancer research, due to its antiinvasive effect by binding to the surface of glioma cells.



Reference

1. DeBin and Strichartz (1991) *Toxicol* 29:1403; 2. DeBin et al. (1993) *Am J Physiol* 264:C361; 3. Meng et al. (2006) *Acta Pharmacol Sin* 28:2019; 4. Wu et al. (2010) *Nanotechnology* (2010) 21:235104

DL-2,7-Diaminosuberoyl-((Tyr³²,Leu³⁴)-NPY (32-36))₂

Cat. No.	Size	Price
BP0401	1 mg	152 €

DL-2,7-Diaminosuberoyl-(Tyr-Arg-Leu-Arg-Tyr-NH₂)₂

M.W. 1706.03 C₈₀H₁₂₄N₂₆O₁₆ [887332-81-2] Desiccate at -20° C
Soluble in water

Highly potent and selective anorectic NPY Y₄ receptor agonist with picomolar affinity (K_i values are 0.05, 7.5, 890 and > 1000 nM for NPY Y₄, Y₁, Y₂ and Y₅, respectively).

DL-2,7-Diaminosuberoyl-(Tyr-Arg-Leu-Arg-Tyr-NH₂)₂

Reference

1. Balasubramaniam et al. (2006) *J. Med Chem* 49:2661; 2. Balasubramaniam et al. (2007) *Peptides* 28:235

Triptorelin

Cat. No.	Size	Price
BP0402	1 mg	70 €

[D-Trp⁶]-LHRH; [D-Trp⁶]-GnRH

M.W. 1311.46 C₆₄H₈₂N₁₈O₁₃ [57773-63-4] Desiccate at -20° C
Soluble to 1 mg/ml in water

A synthetic analogue of gonadorelin (GnRH). By causing constant stimulation of the pituitary, it decreases pituitary secretion of gonadotropins luteinizing hormone (LH) and follicle stimulating hormone (FSH). It is used for some types of fertility treatment, treatment of endometriosis and of advanced prostate cancer. See also buserelin (Cat. No. BP0383) and goserelin (Cat. No. BP0384).

Pyr-His-Trp-Ser-Tyr-D-Trp-Leu-Arg-Pro-Gly-NH₂

Reference

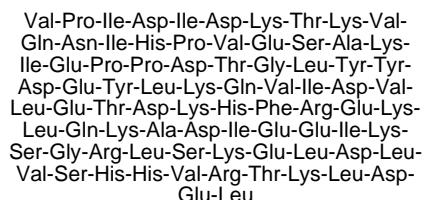
1. Van Leusden (1994) *Gynecol Endocrinol* 8:215; 2. Chardonnens et al. (1998) *Eur J Obstet Gynecol Reprod Biol* 80:143

Nesfatin-1 (1-82) (human)

Cat. No.	Size	Price
BP0403	20 µg	200 €

M.W. 9551.86 C₄₂₇H₆₉₁N₁₁₃O₁₃₄ Desiccate at -20° C
Soluble in water

A recently identified anorexigenic peptide derived from its precursor protein, nonesterified fatty acid/nucleobindin 2 (NUCB2). It has been shown as a novel depot specific adipokine with obesity- and food deprivation-regulated expression.



Reference

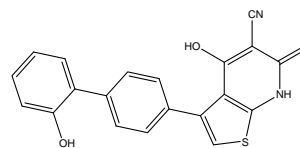
1. Price et al. (2007) *Peptides* 28:2372; 2. Ramanjaneya et al. (2010) *Endocrinology* 151:3169

A 769662

Cat. No.	Size	Price
BS0281	10 mg	120 €

6,7-Dihydro-4-hydroxy-3-(2'-hydroxy[1,1'-biphenyl]-4-yl)-6-oxo-thieno[2,3-b]pyridine-5-carbonitrile; A-769662
M.W. 360.39 C₂₀H₁₂N₂O₃S [844499-71-4] Store at +4° C
Soluble to 100 mM in DMSO or to 25 mM in ethanol

Potent and reversible activator of AMP-activated protein kinase (AMPK) (EC₅₀ = 0.8 μM). See also AICAR (Cat. No. BS0248). Also inhibits Na⁺/K⁺-ATPase at higher concentrations (IC₅₀ = 57 μM).



Reference

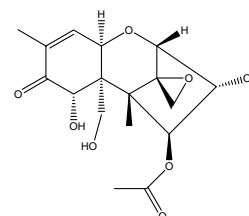
1. Cool et al. (2006) *Cell Metab* 3:403; 2. Göransson et al. (2007) *J Biol Chem* 282:32549; 3. Benziane et al. (2009) *Am J Physiol Cell Physiol* 297:C1554; 4. Guigas et al. (2009) *IUBMB Life* 61:18; 5. Treebak et al. (2009) *Am J Physiol Cell Physiol* 297:C1041

Fusarenon X

Cat. No.	Size	Price
BS0282	1 mg	110 €

3α,7α,15-Trihydroxy-4β-acetoxy-12,13-epoxytrichothec-9-en-8-one; Nivalenol monoacetate; Nivalenol-4-o-acetat; Fusarenon from *Fusarium* sp.
M.W. 354.35 C₁₇H₂₂O₈ [23255-69-8] Desiccate at -20° C (protect from light)
Soluble to 10 mg/ml in DMSO or in ethanol

A trichothecene mycotoxin from various *Fusarium* strains (e.g. *Fusarium nivale* Fn 2B). It induces apoptosis in mouse thymocytes (CD4+ CD8+ thymocytes). Also displays immunosuppressive effects by depressing the mitogenic responses of mouse lymphocytes to the T-cell mitogens, phytohaemagglutinin (PHA) and concanavalin A (Con A).



Reference

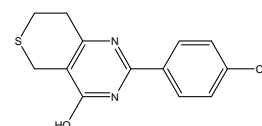
1. Ueno et al. (1975) *Appl Microbiol* 30:4; 2. Matsuda et al. (1982) *Immunology* 45:743; 3. Miura et al. (1998) *Toxicology* 127:195; 4. Poapolathep et al. (2003) *Toxicon* 41:1047

XAV 939

Cat. No.	Size	Price
BS0283	10 mg	138 €

3,5,7,8-Tetrahydro-2-[4-(trifluoromethyl)phenyl]-4H-thiopyrano[4,3-d]pyrimidin-4-one; XAV939
M.W. 312.31 C₁₄H₁₁F₃N₂OS [284028-89-3] Store at RT
Soluble to 50 mM in DMSO or in ethanol

Tankyrase (TNKS) inhibitor (IC₅₀ values are 11 nM and 4 nM for TNKS1 and TNKS2 respectively). It potently inhibits Wnt/β-catenin signaling via stimulation of β-catenin degradation and stabilization of axin.



Reference

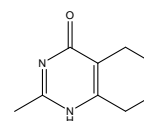
1. Nusse (2008) *Cell Res* 18:523; 2. Huang et al. (2009) *Nature* 461:614; 3. Adler (2009) *Sci Signal* 9:ec326; 4. Peterson (2009) *Nature* 461:599

DR2313

Cat. No.	Size	Price
BS0284	10 mg	110 €

1,5,7,8-Tetrahydro-2-methyl-4H-thiopyrano[4,3-d]pyrimidin-4-one
M.W. 182.24 C₈H₁₀N₂OS [284028-90-6] Store at +4° C
Soluble to 50 mM in water

Potent, brain-penetrant and water-soluble poly(ADP-ribose) polymerase (PARP) inhibitor (IC₅₀ values are 0.20 μM and 0.24 μM for PARP-1 and PARP-2 respectively). Neuroprotective agent *in vitro* and *in vivo*.



Reference

1. Nakajima et al. (2005) *J Pharmacol Exp Ther* 312:472; 2. Jagtap and Szabo (2005) *Nat Rev Drug Discov* 4:421