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PEPTIDES

Gut Appetite Peptides from Cambridge Research Biochemicals

Cambridge Research Biochemicals has introduced an extensive range of gut appetite peptides which are involved in energy homeostasis. Orexigenic peptides promote appetite while anorexigenic peptides decrease it. Communication between the gut, the brain, and adipose tissue leads to appetite regulation and thus body mass homeostasis.

“Ghrelin is an endogenous orexigenic peptide that promotes appetite and fat storage. Secreted by the stomach, ghrelin signals the hypothalamus to activate neuropeptide Y (NPY) neurones (containing NPY and orexin) and inactivate pro-opiomelanocortin (PMOC) neurones. The direct effects of ghrelin are by increasing gastric motility and gastric acid secretion. Ghrelin levels are inhibited by glucose to provide direct feedback between nutrition status and appetite regulation.”

After food intake ghrelin decreases and glucagon-like peptide-1 (GLP-1) is released. GLP-1 is produced in the intestinal endocrine L cells with peptide YY (PYY). GLP-1 and PYY colocalise and show the same post-food increase suggesting they provide complementary activity. The anorexigenic effects through binding the GLP-1 receptor (GLP-1R), lead to feelings of satiety. Exendin-4 is a GLP-1R agonist and has been shown to reduce food intake.

GLP-1 also stimulates insulin secretion in a glucose-dependent manner. Insulin secretion from pancreatic β cells rapidly increases after food intake. This leads to an increase in glucose uptake and metabolism. Insulin is also transported to the hypothalamus to provide an anorexigenic signal. Insulin binds to receptors in the central nervous system activating POMC neurons while inhibiting neuropeptide Y (NPY) and agouti-related protein (AgRP) neurons through the Phosphoinositide 3-kinase (PI3K)/Akt signalling pathway.

Citation:
Bassil *et al*., (2007). Little or no ability of obestatin to interact with ghrelin or modify motility in the rat gastrointestinal tract. Br. J. Pharmacol., 150(1): 58. doi: 10.1038/sj.bjp.0706969.

Reference:
Vohra *et al*., (2021). AgRP/NPY and POMC neurons in the arcuate nucleus and their potential role in treatment of obesity. Eur. J. Pharmacol., 915: 174611. doi: 10.1016/j.ejphar.2021.174611.

Orexigenic Agents

Ghrelin Human
crb1000252
GSS(n-octanoyl)FLSPEHQRVQ-QRKESKKPPAKLQPR-acid
1mg £220.00

Angiotensin I
crb1000132
DRVYIHPFHL-acid
1mg £110

Angiotensin II (1-8)
crb1000687
DRVYIHPF-acid
1mg £110

Angiotensin II Antipeptide
crb1000689
EGVYVHPV-acid
1mg £110

Angiotensin III
crb1000238
RVYIHPF-acid
1mg £110

Angiotensin IV (3–8)
crb1000686
VYIHPF-acid
1mg £110

Apelin-36 Human
crb1000048
LVQPRGSRNGPGPWQGGRRK FRRQRPRLSHKGPMPF-acid
1mg £220.00

Anorexigenic Agents

Glucagon (1-29)-[Cys(Cy5)]
crb1130431
HSQGTFTSDYSKYLDSRRAQDFV-QWLMNT-[Cys(Cy5)]-acid
0.5mg £220.00

GIP, human
crb1000991
YAEGTFISDYSIAMDKIHQQDFVN-WLLAQKGKKNDWKHNITQ-acid
1mg £270

Somatostatin 14
crb1001047
AGCKNFFWKTFTSC-acid
1mg £110

Alexa Fluor® 488 Insulin
crb1110900
0.5mg £440

C-Peptide (57-87) Human
crb1000855
EAEDLQVGQVELGGGPGAGSLQ-PLALEGSLQ-acid
1mg £220

Amylin (1-37) Human
crb1000269
KCNTATCATQRLANFLVHSSNNFG-AILSSTNVGSNTY-acid,
Disulphide bridge Cys2-Cys7
1mg £220

[Biotin]-GLP-1
crb1000881
[Biotin]-HDEFERHAEGTFTSDVSS-YLEGQAAKEFIAWLVKGR-amide
1mg £220

Liraglutide
crb1001347
HAEGTFTSDVSSYLEGQAA-[Lys([Palm]-[g-Glu]-)]-EFIAWLVRGRG-acid
1mg £270

Glucagon like-peptide-2 (GLP-2)
crb1001638
DGSFSDEMNTILDNLAARDFINWLI QTKITD-acid
1mg £220

Teduglutide (GLP2 2G)
crb1000390
HGDGSFSDEMNTILDNLAARDFINWL-IQTKITD-acid
1mg £220

Oxyntomodulin heavy
crb1300756
HSQGTFTSDYSKY-[U-$^{13}C_6$,^{15}N-Leu]-DSRRAQD-[U-$^{13}C_6$,^{15}N-Phe]-VQW-[U-$^{13}C_6$,^{15}N-Leu]-MNTKRNRNNIA-acid
25nmol £220

Exendin 3
crb1000147
HSDGTFTSDLSKQMEEEAVRLFIEWL-KNGGPSSGAPPPS-amide
1mg £220

Exendin 4
crb1000146
HGEGTFTSDLSKQMEEEAVRLFIEWL-KNGGPSSGAPPPS-amide
1mg £220

PYY (1-36) Heavy
crb1300937
YPIKPEAPGEDASPEE-[U-$^{13}C_6$,^{15}N-Leu]-NRYYAS-[U-$^{13}C_6$,^{15}N-Leu]-RHY-[U-$^{13}C_6$,^{15}N-Leu]-NLVTRQRY-amide
25nmol £220

Gastrin Releasing Peptide, human
crb1000875
VPLPAGGGTVLTKMYPRGNHWAVG-HLM-amide
1mg £110

Protein Tyrosine Phosphatase (PTP) substrate
crb1000745
END-[pTyr]-INASL-acid
1mg £140

Motilin
crb1000590
FVPIFTYGELQRMQEKERNKGQ-acid
1mg £110

DISCOVERY® Peptides is the catalogue range from Cambridge Research Biochemicals, a custom peptide provider. If your desired peptide is not listed or you wish to order a larger quantity, please request a custom synthesis quotation by contacting crbsales@crbdiscovery.com

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