

WADA Verbotliste 2021, S2 Peptidhormone.../ 2.3 Growth Hormone ... (Änderungen zu 2020 in rot)

Substanzname	Struktur (bei Peptiden Aminosäuresequenz)	AS	Monoisotopische Masse [Da]	Literatur	Synonym
2.3 Growth Hormone (GH), its fragments and releasing factors, including, but not limited to:					
Growth Hormone fragments, e.g.					
GH		191	22111,04	www.drugbank.ca	Somatropin, Somatotropin
AOD-9604	YLRIVQCRSVEGSCGF	16	1813,9	Ng 2000	
hGH 176-191	FLRIVQCRSVEGSCGF	16	1797,9	PubChem	Somatropin (176-191)
Growth Hormone Releasing Hormone (GHRH) and its analogues					
GHRH	YADAIFTNSYRKVLGQLSARKLLQDIMSRQQGESNQERGARARL-NH2	44	5036,7	Guillemin 1982	Somatoliberin
CJC-1293	YdADAIFTNSYRKVLGQLSARKLLQDIMSR-NH2	29	3355,8	Knoop 2016	"GHRH (1-29) aber, dA statt A"
CJC-1295	YdADAIFTQSYRKVLAQLSARKLLQDILSR-NH2	29	3365,9	Knoop 2016	
Sermorelin	YADAIFTNSYRKVLGQLSARKLLQDIMSR-NH2	29	3355,8	Knoop 2016	Geref, GHRH (1-29)
Tesamorelin	hexenoyl-YADAIFTNSYRKVLGQLSARKLLQDIMSRQQGESNQERGARARL-NH2	44	5132,7	Knoop 2016	Egrifta, "hexenoyl-GHRH"
Growth Hormone Secretagogues (GHS), e.g. lenomorelin (ghrelin) and ghrelin mimetics,					
Ghrelin	GSXFLSPEHQQRKESKPPAKLQPR (X = Serin-octyl)	28	3368,9	PubChem	
Anamorelin	kein Peptid, C ₃₁ H ₄₂ N ₆ O ₃	-	546,332	PubChem	ONO-7643, RC-1291
Ipamorelin	Aib-His-(D-β-Nal)-(D-Phe)-Lys-NH2	5	711,385	Thomas 2011	
Macimorelin	kein Peptid, C ₂₆ H ₃₀ N ₆ O ₃	-	474,238	Lange 2020	Macrilen, EP-01572
Tabimorelin	kein Peptid, C ₃₂ H ₄₀ N ₄ O ₃	-	528,310	PubChem, Lange 2020	NN-703
GH-Releasing Peptides (GHRPs), e.g.					
Alexamorelin	Ala-His-(D-Mrp)-Ala-Trp-(D-Phe)-Lys-NH2	7	957,497	Thomas 2011	
GHRP-1	Ala-His-(D-β-Nal)-Ala-Trp-(D-Phe)-Lys-NH2	6	954,486	Thomas 2011	
GHRP-2 (pralmorelin)	(D-Ala)-(D-β-Nal)-Ala-Trp-(D-Phe)-Lys-NH2	6	817,427	Thomas 2011	
GHRP-3	Aib-(D-Trp)-(D-Pro)-(D-Ile)-Arg-NH2	4	654,400	Thomas 2016	
GHRP-4	(D-Trp)-Ala-Trp-(D-Phe)-NH2	4	607,292	Thomas 2011	
GHRP-5	Tyr-(D-Trp)-Ala-Trp-(D-Phe)-NH2	5	770,354	Thomas 2011	
GHRP-6	His-(D-Trp)-Ala-Trp-(D-Phe)-Lys-NH2	6	872,444	Thomas 2011	
Hexarelin	His-(D-Mrp)-Ala-Trp-(D-Phe)-Lys-NH2	6	886,460	Thomas 2011	

Nal = Naphthylalanine, Mrp = 2-Methyltryptophane, Aib = Aminoisobutyric acid

dA = D-Alanin, AS = Anzahl Aminosäuren

Bei Peptiden mit AS > 10 wurden für die Sequenz Symbole verwendet, ansonsten die Abkürzungen

Literatur
PubChem, https://pubchem.ncbi.nlm.nih.gov/#
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Lange T, Thomas A, Görgens C, Bidlingmaier M, Schilbach K, Fichant E, Delahaut P, Thevis M. Comprehensive insights into the formation of metabolites of the ghrelin mimetics capomorelin, macimorelin and tabimorelin as potential markers for doping con <i>Biomed Chromatogr</i> . 2021 Jan 17:e5075. doi: 10.1002/bmc.5075. Epub ahead of print. PMID: 33458843
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Ng FM, Sun J, Sharma L, Libinaka R, Jiang WJ, Gianello R. Metabolic studies of a synthetic lipolytic domain (AOD9604) of human growth hormone. <i>Horm Res</i> . 2000;53(6):274-8.
Guillemin R, Brazeau P, Böhlen P, Esch F, Ling N, Wehrenberg WB. Growth hormone-releasing factor from a human pancreatic tumor that caused acromegaly. <i>Science</i> , 1982 Nov 5;218(4572):585-7.