

## Amino Acid

No. of Amino Acids	Neuropeptide	3-Letter Code	1-Letter Code	Mol. Wt	Sequence	Structure	Side Chain	Ground State Energy (kJ/mol)	Physiological Function	Nature (Hydrophobic or Not)
5	Leucine-enkephalin	Tyr-Gly-Gly-Phe-Leu	YGGFL	555.62	YGGFL	linear	hydrophobic	-33.2	Analgesia	Hydrophobic
5	Methionine-enkephalin	Tyr-Gly-Gly-Phe-Met	YGGFM	574.65	YGGFM	linear	hydrophobic	-29.4	Analgesia	Hydrophobic
6	Bradykinin	Arg-Pro-Pro-Gly-Phe-Ser	RPPGFS	1060.2	RPPGFS	linear	hydrophilic	-98.9	Vasodilation, pain	Hydrophilic
6	Somatostatin-14	Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys	AGCKNFFWKTFSSC	1637.9	AGCKNFFWKTFSSC	disulfide bridge	hydrophobic	-45.9	Inhibition of various hormones	Hydrophobic

7	Substance P	Arg-Pro-Lys-Pro-Gln-Gln-Phe	RPKPQQF	1348.7	RPKPQQF	linear	hydrophilic	-131.6	Pain, inflammation	Hydrophilic
8	Oxytocin	Cys-Tyr-Ile-Gln-Asn-Cys-Pro-Leu-Gly-NH2	CYIQNCPLG-NH2	1007.2	CYIQNCPLG-NH2	disulfide bridge	hydrophilic	-50.2	Social bonding, childbirth	Hydrophilic
8	Vasopressin	Cys-Tyr-Phe-Gln-Asn-Cys-Pro-Arg-Gly-NH2	CYFQNCPRG-NH2	1084.2	CYFQNCPRG-NH2	disulfide bridge	hydrophilic	-51.9	Water reabsorption, social behavior	Hydrophilic
9	Neurotensin	Ser-Lys-Asn-Pro-Arg-Arg-Pro-Tyr-Ile	SLNPRRPYI	1672.0	SLNPRRPYI	linear	hydrophobic	-54.2	Regulation of dopamine pathways, analgesia	Hydrophobic
9	Leucine-enkephalin	Leu-Enk	L	555.63	YGGFLRRQO	Linear	Hydrophobic	-132.3	Analgesic, modulates neurotransmitters	Hydrophobic
10	Substance P	Sub P	S	1347.47	RPKPQQFFGLM	Linear	Hydrophilic	-85.5	Neurotransmitter, vasodilator, immune response	Hydrophilic

11	Endothelin-1	ET-1	E	2495.68	SWMEERQKEEV	Linear	Hydrophobic	-85.5	Vasoconstriction, cell proliferation	Hydrophobic
12	Oxytocin	OXT	O	1007.19	CYIQNCPLG	Linear	Hydrophilic	-63.9	Social bonding, reproductive functions	Hydrophilic
13	Vasopressin	AVP	V	1084.23	CYFQNCPRGSC	Linear	Hydrophilic	-63.9	Water balance, vasoconstriction, social bonding	Hydrophilic
14	Bradykinin	Bradykinin	B	1060.22	RPPGFSPFRPPPK	Linear	Hydrophilic	-85.5	Vasodilation, inflammation, pain	Hydrophilic
15	Angiotensin II	Ang II	A	1046.19	DRVYIHPFHL	Linear	Hydrophobic	-113.7	Vasoconstriction, aldosterone secretion	Hydrophobic
16	Secretin	Secretin	S	2126.37	HSDGTFTSELSRLRLF	Linear	Hydrophilic	-102.1	Stimulates pancreatic secretion, inhibits gastric secretion	Hydrophilic
17	Neuropeptide Y	NPY	Y	2032.26	SYSQPQARYLGLPVRPHL	Linear	Hydrophobic	-204.5	Appetite regulation, stress response, vasoconstriction	Hydrophobic
18	Adrenocorticotrophic hormone	ACTH	A	4546.96	SYSMEHFRWGKPVGKKRRPVKVYP	Linear	Hydrophilic	-138.4	Regulates adrenal gland function, stress response	Hydrophilic
19	Calcitonin gene-related peptide	CGRP	C	2204.32	CTTSSTCNSKPRRPRLVLMNHANV	Linear	Hydrophilic	-124.6	Vasodilation, pain	Hydrophilic

									modulation, migraine	
20	Galanin	Galanin	G	2559.8 7	SYTQDYYSLRGVPINNSLRY	Linear	Hydrophobic	-159.7	Modulates neurotransmitters, appetite regulation, pain	Hydrophobic