ALPHA DIAGNOSTIC INTERNATIONAL

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Cat# **SP-88338-5**

Description: [Ala13]-Apelin-13 [Gln-Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-Met-Pro-Ala; MW: 1474.76]

Size: 5 mg

Purity: >95%

Store: Desiccated at -20oC.

Apelin (also known as APLN) is a peptide that in humans is encoded by the APLN gene. Apelin is the endogenous ligand for the G-protein-coupled APJ receptor that is expressed at the surface of some cell types. It is widely expressed in various organs such as the heart, lung, kidney, liver, adipose tissue, gastrointestinal tract, brain, adrenal glands, endothelium, and human plasma. This peptide is produced through processing from the C-terminal portion in the pre-proprotein consisting of 77 amino acid residues and exists in multiple molecular forms. Although the main physiological functions of apelin have not been clarified yet, it has been demonstrated that apelin partially suppresses cytokine production from mouse spleen and, specifically, induces the promotion of extracellular acidification and inhibition of cAMP production in Chinese hamster ovary cells. Moreover, it is involved in the regulation of blood pressure and blood flow.

Apelin gene encodes a pre-proprotein of 77 amino acids, with a signal peptide in the N-terminal region. After translocation into the endoplasmic reticulum and cleavage of the signal peptide, the proprotein of 55 amino acids may generate several active fragments: a 36 amino acid peptide corresponding to the sequence 42-77 (apelin 36), a 31 amino acid peptide corresponding to the sequence 47-77 (apelin 31), a 28 amino acid peptide corresponding to the sequence 50-77 (apelin 28) and a 13 amino acid peptide corresponding to the sequence 65-77 (apelin 13). This latter fragment may also undergo a pyroglutamylation at the level of its N-terminal glutamine residue. However the presence and/or the concentrations of those peptides in human plasma has been questioned. Recently, 46 different apelin peptides ranging from apelin 55 (proapelin) to apelin 12 have been identified in bovine colostrum, including C-term truncated isoforms.

References: Tatemoto K (1998) BBRC 251, 471-476; Lee DK (2000) J. Neurochem. 74, 34-41; Szokodi I (2002) Cir. Res. 91,434-440; Klein MJ (2005) Phamacol. Ther. 107, 198-211; Masri B (2004) FASEB J 18, 1909-1911; Kasai A (2004) BBRC 325, 395-400; Cox CM (2006) Deve. Biol. 296, 177-189

Related Items

Catalog#	ProdDescription
SP-55401-1	Apelin-13, human, bovine [H-Gln-Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-Met-Pro-Phe-OH; MW: 1550.86
SP-68216-5	[Tyr0]-Apelin-13 (human, bovine, mouse, rat) [Tyr-Gln-Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-Met-Pro-Phe; MW 1714.03]
SP-71114-1	Apelin-36, human (AA: Leu-Val-Gln-Pro-Arg-Gly-Ser-Arg-Asn-Gly-Pro-Gly-Pro-Trp-Gln-Gly-Gly-Arg-Arg-Lys-Phe-Arg-Arg-Gln-Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-Met-Pro-Phe) (MW: 4195.92)
SP-71115-5	Apelin-12 (AA: Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-Met-Pro-Phe) (MW: 1422.73)
SP-88338-5	[Ala13]-Apelin-13 [Gln-Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-Met-Pro-Ala; MW: 1474.76]
SP-88339-1	[Phe17] - Apelin 17 [Lys-Phe-Arg-Arg-Gln-Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-Met-Pro-Phe; MW 2138.59]
SP-88340-5	[Pyr1] - Apelin-13 [Pyr-Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-Met-Pro-Phe; MW 1533.85]
SP-88341-5	Apelin-15 (63 - 75) (AA: Arg-Arg-Gln-Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-Met) (MW: 1618.94)
SP-88342-1	Apelin-15 (63-77) (AA: Arg-Arg-Gln-Arg-Pro-Arg-Leu-Ser-His-Lys-Gly-Pro-Met-Pro-Phe) (MW: 1863.24)

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