

Apelin (M-77): sc-33805

BACKGROUND

Apelin (APEL), an endogenous ligand for APJ, is an alternate co-receptor with CD4 for HIV-1 infection. This secreted protein inhibits HIV-1 entry into cells that coexpress APJ and CD4. By proteolytic processing of the peptide precursor, several different active peptides may be produced. Apelin-36, one such inotropic peptide, is being investigated as a potential plasma marker of cardiopulmonary disease. Apelin is highly expressed in brain, mainly in the thalamus, frontal cortex, hypothalamus and midbrain. Apelin is also secreted by the mammary gland into the colostrum and milk. Oral intake of Apelin (in milk and colostrum) may be important in the modulation of the immune responses in neonates and newborns. Apelin has also been found to be a potent stimulator of cardiac contractility and may function in the regulation of the cardiovascular system.

REFERENCES

1. Tatemoto, K., et al. 1998. Isolation and characterization of a novel endogenous peptide ligand for the human APJ receptor. *Biochem. Biophys. Res. Commun.* 251: 471-476.
2. Habata, Y., et al. 1999. Apelin, the natural ligand of the orphan receptor APJ, is abundantly secreted in the colostrum. *Biochim. Biophys. Acta* 1452: 25-35.
3. Lee, D.K., et al. 2000. Characterization of Apelin, the ligand for the APJ receptor. *J. Neurochem.* 74: 34-41.
4. Cayabyab, M., et al. 2000. Apelin, the natural ligand of the orphan seven-transmembrane receptor APJ, inhibits human immunodeficiency virus type 1 entry. *J. Virol.* 74: 11972-11976.
5. Wei, L., et al. 2005. Regulation of Apelin mRNA expression by insulin and glucocorticoids in mouse 3T3-L1 adipocytes. *Regul. Pept.* 132: 27-32.

CHROMOSOMAL LOCATION

Genetic locus: APLN (human) mapping to Xq26.1; Apln (mouse) mapping to X A4.

SOURCE

Apelin (M-77) is a rabbit polyclonal antibody raised against amino acids 1-77 representing full length Apelin of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

Apelin (M-77) is recommended for detection of Apelin of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Apelin siRNA (h): sc-44741, Apelin siRNA (m): sc-44742, Apelin shRNA Plasmid (h): sc-44741-SH, Apelin shRNA Plasmid (m): sc-44742-SH, Apelin shRNA (h) Lentiviral Particles: sc-44741-V and Apelin shRNA (m) Lentiviral Particles: sc-44742-V.

Molecular Weight of Apelin monomer: 8 kDa.

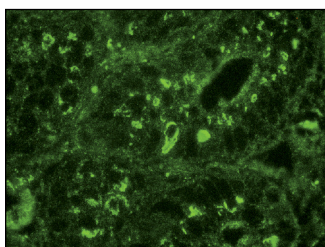
Molecular Weight of Apelin dimer: 16 kDa.

Positive Controls: PC-12 cell lysate: sc-2250 or A-10 cell lysate: sc-3806.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Apelin (M-77): sc-33805. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Piairo, P., et al. 2011. The apelinergic system in the developing lung: expression and signaling. *Peptides* 32: 2474-2483.

RESEARCH USE

For research use only, not for use in diagnostic procedures.