

APLNR (h): 293T Lysate: sc-115189

BACKGROUND

The apelin receptor (APLNR) is a G protein-coupled integral membrane protein exhibiting a hypothalamic distribution in brain, glial cells, astrocytes and neuronal subpopulations. APLNR is bound by its cognate neuropeptide ligand, apelin, promoting receptor internalization to the nucleus and dose-dependent inhibition of forskolin-induced cAMP production. However, deletion studies of the apelin agonist have shown that internalization is not mandatory for decreasing vasopressin release, a hypotensive action of APLNR signaling. Further evidence for functional dissociation of APLNR stimulation and internalization was exhibited *in vitro* using mutational studies of a nuclear localization signal sequence. These findings may suggest the presence of multiple, functionally-differing conformational states for the receptor. Stress studies in rodents have shown APLNR is under negative regulation by glucocorticoids and may be involved in controlling hypothalamic function. APLNR also functions as an alternate coreceptor with CD4 for HIV-1 infection.

REFERENCES

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2. Reaux, A., et al. 2001. Physiological role of a novel neuropeptide, apelin, and its receptor in the rat brain. *J. Neurochem.* 77: 1085-1096.
3. O'Carroll, A.M., et al. 2003. APJ receptor mRNA expression in the rat hypothalamic paraventricular nucleus: regulation by stress and glucocorticoids. *J. Neuroendocrinol.* 15: 1095-1101.
4. El Messari, S., et al. 2004. Functional dissociation of apelin receptor signaling and endocytosis: implications for the effects of apelin on arterial blood pressure. *J. Neurochem.* 90: 1290-1301.
5. Lee, D.K., et al. 2004. Agonist-independent nuclear localization of the apelin, Angiotensin AT1, and Bradykinin B2 receptors. *J. Biol. Chem.* 279: 7901-7908.
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CHROMOSOMAL LOCATION

Genetic locus: APLNR (human) mapping to 11q12.1.

PRODUCT

APLNR (h): 293T Lysate represents a lysate of human APLNR transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

APLNR (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive APLNR antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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