

Calcyon (h): 293T Lysate: sc-115499

BACKGROUND

Calcyon is a single transmembrane protein that interacts with D1 dopamine receptors. Dopamine is a neurotransmitter that regulates synaptic transmission involved in learning and memory. D1 receptors, the most abundant dopamine receptor in the central nervous system, appear to modulate the activity of D2 dopamine receptors, mediate various behavioural responses, and regulate neuron growth and differentiation. Calcyon is present in neuronal cell bodies and processes of the cortex and hippocampus, and it is especially abundant in pyramidal neurons. Interaction of Calcyon with D1 receptors results in a release of intracellular calcium.

REFERENCES

1. Zhou, Q.Y., Grandy, D.K., Thambi, L., Kushner, J.A., Van Tol, H.H., Cone, R., Pribnow, D., Salon, J., Bunzow, J.R. and Civelli, O. 1990. Cloning and expression of human and rat D1 dopamine receptors. *Nature* 347: 76-80.
2. Huang, Y.Y. and Kandel, E.R. 1995. D1/D5 receptor agonists induce a protein synthesis-dependent late potentiation in the CA1 region of the hippocampus. *Proc. Natl. Acad. Sci. USA* 92: 2446-2450.
3. Ogawa, N. 1995. Molecular and chemical neuropharmacology of dopamine receptor subtypes. *Acta Med. Okayama* 49: 1-11.
4. Schmidt, U., Pilgrim, C. and Beyer, C. 1998. Differentiative effects of dopamine on striatal neurons involve stimulation of the cAMP/PKA pathway. *Mol. Cell. Neurosci.* 11: 9-18.
5. Lezcano, N., Mrzljak, L., Eubanks, S., Levenson, R., Goldman-Rakic, P. and Bergson, C. 2000. Dual signaling regulated by Calcyon, a D1 dopamine receptor interacting protein. *Science* 287: 1660-1664.
6. Undie, A.S., Berki, A.C. and Beardsley, K. 2000. Dopaminergic behaviors and signal transduction mediated through adenylate cyclase and phospholipase C pathways. *Neuropharmacology* 39: 75-78.

CHROMOSOMAL LOCATION

Genetic locus: CALY (human) mapping to 10q26.3.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

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

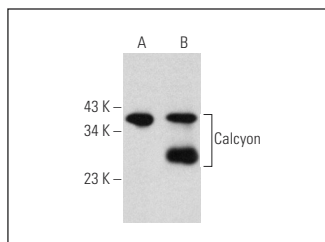
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Calcyon (G-8): sc-271004 is recommended as a positive control antibody for Western Blot analysis of enhanced human Calcyon expression in Calcyon transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Calcyon (G-8): sc-271004. Western blot analysis of Calcyon expression in non-transfected: sc-117752 (A) and human Calcyon transfected: sc-115499 (B) 293T whole cell lysates.

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.