SANTA CRUZ BIOTECHNOLOGY, INC.

Calcyon (N-17): sc-10836

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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., et al. 1990. Cloning and expression of human and rat D1 dopamine receptors. Nature 347: 76-80.
2. Huang, Y.Y., et al. 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., et al. 1995. Molecular and chemical neuropharmacology of dopamine receptor subtypes. Acta Med. Okayama 49: 1-11.
4. Schmidt, U., et al. 1998. Differentiative effects of dopamine on striatal neurons involve stimulation of the cAMP/PKA pathway. Mol. Cell. Neurosci. 11: 9-18.
5. Lezcano, N., et al. 2000. Dual signaling regulated by Calcyon, a D1 dopamine receptor interacting protein. Science 287: 1660-1664.
6. Undie, A.S., et al. 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.

SOURCE

Calcyon (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Calcyon of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-10836 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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

Calcyon (N-17) is recommended for detection of Calcyon of 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 Calcyon siRNA (h): sc-43656, Calcyon shRNA Plasmid (h): sc-43656-SH and Calcyon shRNA (h) Lentiviral Particles: sc-43656-V.

Molecular Weight of unglycosylated Calcyon: 24 kDa.

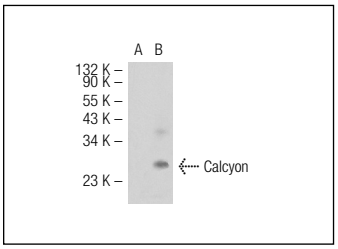
Molecular Weight of glycosylated Calcyon: 28-35 kDa.

Positive Controls: Calcyon (h): 293T Lysate: sc-115499, H4 cell lysate: sc-2408 or IMR-32 cell lysate: sc-2409.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Calcyon (N-17): sc-10836. Western blot analysis of Calcyon expression in non-transfected: sc-117752 (**A**) and human Calcyon transfected: sc-115499 (**B**) 293T whole cell lysates.

RESEARCH USE

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