

Calcyon (G-8): sc-271004

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 behavioral 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

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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. 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; Caly (mouse) mapping to 7 F4.

SOURCE

Calcyon (G-8) is a mouse monoclonal antibody raised against amino acids 4-178 (deletion 134-151) mapping within an internal region of Calcyon of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Calcyon (G-8) is available conjugated to agarose (sc-271004 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271004 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271004 PE), fluorescein (sc-271004 FITC), Alexa Fluor[®] 488 (sc-271004 AF488), Alexa Fluor[®] 546 (sc-271004 AF546), Alexa Fluor[®] 594 (sc-271004 AF594) or Alexa Fluor[®] 647 (sc-271004 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271004 AF680) or Alexa Fluor[®] 790 (sc-271004 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Calcyon (G-8) is recommended for detection of Calcyon of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 siRNA (m): sc-60037, Calcyon shRNA Plasmid (h): sc-43656-SH, Calcyon shRNA Plasmid (m): sc-60037-SH, Calcyon shRNA (h) Lentiviral Particles: sc-43656-V and Calcyon shRNA (m) Lentiviral Particles: sc-60037-V.

Molecular Weight of unglycosylated Calcyon: 24 kDa.

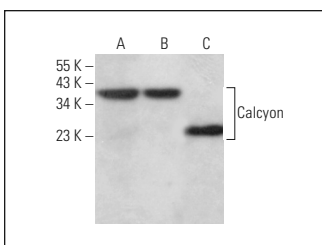
Molecular Weight of glycosylated Calcyon: 28-35 kDa.

Positive Controls: EOC 20 whole cell lysate: sc-364187, IMR-32 cell lysate: sc-2409 or Calcyon (h): 293T Lysate: sc-115499.

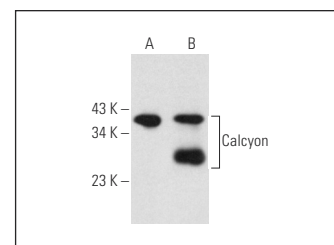
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



Calcyon (G-8): sc-271004. Western blot analysis of Calcyon expression in human cerebellum tissue extract (A) and IMR-32 (B) and EOC 20 (C) whole cell lysates.



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

RESEARCH USE

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