

KChIP4 (N-14): sc-46381

BACKGROUND

The downstream regulatory element, DRE, acts as a location-dependent gene silencer. DREAM (for DRE-antagonist modulator) is a Ca²⁺-regulated transcriptional repressor that specifically binds to the DRE. DREAM regulates transcription of prodynorphin and c-Fos genes and shows 99% nucleotide homology to the Kv channel-interacting proteins (KChIPs). KChIP family members include KChIP1, which is expressed in brain, KChIP2, which is expressed in heart, brain and lung, KChIP3 (also designated calsenilin), which is expressed in brain and testis and KChIP4.

REFERENCES

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2. Link, W.A., et al. 2004. Day-night changes in downstream regulatory element antagonist modulator/potassium channel interacting protein activity contribute to circadian gene expression in pineal gland. *J. Neurosci.* 24: 5346-5355.
3. Rhodes, K.J., et al. 2004. KChIPs and Kv4 α subunits as integral components of A-type potassium channels in mammalian brain. *J. Neurosci.* 24: 7903-7915.
4. Baranauskas, G. 2004. Cell-type-specific splicing of KChIP4 mRNA correlates with slower kinetics of A-type current. *Eur. J. Neurosci.* 20: 385-391.
5. Lin, Y.L., et al. 2004. Evidence showing an intermolecular interaction between KChIP proteins and Taiwan cobra cardiotoxins. *Biochem. Biophys. Res. Commun.* 319: 720-724.
6. Zhou, W., et al. 2004. Structural insights into the functional interaction of KChIP1 with Shal-type K⁺ channels. *Neuron.* 41: 573-586.

CHROMOSOMAL LOCATION

Genetic locus: KCNIP4 (human) mapping to 4p15.31; Kcnp4 (mouse) mapping to 5 B3.

SOURCE

KChIP4 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of KChIP4 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-46381 P, (100 μ g 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.

RESEARCH USE

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

APPLICATIONS

KChIP4 (N-14) is recommended for detection of KChIP4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 KChIP4 siRNA (h): sc-45837, KChIP4 siRNA (m): sc-45838, KChIP4 shRNA Plasmid (h): sc-45837-SH, KChIP4 shRNA Plasmid (m): sc-45838-SH, KChIP4 shRNA (h) Lentiviral Particles: sc-45837-V and KChIP4 shRNA (m) Lentiviral Particles: sc-45838-V.

Molecular Weight of KChIP4: 29 kDa.

Positive Controls: SK-N-MC Cell Lysate : sc-2237, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

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) 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.

PROTOCOLS

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


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Try **KChIP4 (H-1): sc-373732**, our highly recommended monoclonal alternative to KChIP4 (N-14).