

DREAM (K-17): sc-9309

BACKGROUND

DREAM (for DRE-antagonist modulator) is a Ca^{2+} -regulated transcriptional repressor that specifically binds to the downstream regulatory elements (DRE). DRE is a regulatory sequence that silences basal transcription and is localized to the promoter region of the gene encoding human prodynorphin, an opioid peptide involved in memory acquisition and pain. DREAM forms functional homotetramers that are required for the interaction with the DRE. This association is highly influenced by calcium, as an increase in Ca^{2+} directly inhibits DREAM binding and thereby blocks the repressor activity of DREAM. DREAM transcripts are detected in brain, thymus and thyroid gland, and it is expressed as a nuclear protein. DREAM has been shown to inhibit transcription of other proteins containing DRE-like motifs, including the gene encoding for the AP-1 transcription factor c-Fos, suggesting that DREAM may influence a wide variety of cellular genes.

REFERENCES

1. Morgan, J.I., et al. 1986. Role of ion flux in the control of c-Fos expression. *Nature* 322: 552-555.
2. Weisskopf, M.G., et al. 1993. The opioid peptide dynorphin mediates heterosynaptic depression of hippocampal mossy fibre synapses and modulates long-term potentiation. *Nature* 365: 188.

CHROMOSOMAL LOCATION

Genetic locus: KCNIP3 (human) mapping to 2q11.1, KCNIP2 (human) mapping to 10q24.32; Kcnp3 (mouse) mapping to 2 F1, Kcnp2 (mouse) mapping to 19 C3.

SOURCE

DREAM (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of DREAM 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-9309 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DREAM (K-17) is recommended for detection of DREAM and KCHIP2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

DREAM (K-17) is also recommended for detection of DREAM and KCHIP2 in additional species, including equine, canine, bovine, porcine and avian.

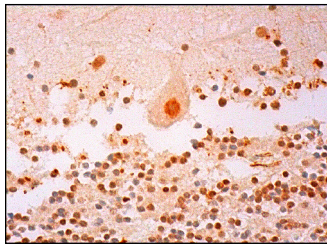
Molecular Weight of DREAM: 32 kDa.

Positive Controls: H4 cell lysate: sc-2408.

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



DREAM (K-17): sc-9309. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing nuclear staining of Purkinje cell, cells in granular layer and cells in molecular layer.

SELECT PRODUCT CITATIONS

1. Leclerc, G.M., et al. 2005. Identification of a novel OCT1 binding site that is necessary for the elaboration of pulses of rat GnRH promoter activity. *Mol. Cell. Endocrinol.* 245: 86-92.
2. Chavira-Suárez, E., et al. 2011. Expression and high glucose-mediated regulation of K^+ channel interacting protein 3 (KCHIP3) and KV4 channels in retinal Müller glial cells. *Biochem. Biophys. Res. Commun.* 404: 678-683.

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.


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Satisfaction
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Try **DREAM (A-9): sc-166916**, our highly recommended monoclonal alternative to DREAM (K-17).