

DREAM (FL-214): sc-9142

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.

CHROMOSOMAL LOCATION

Genetic locus: KCNIP3 (human) mapping to 2q11.1; Kcnip3 (mouse) mapping to 2 F1.

SOURCE

DREAM (FL-214) is a rabbit polyclonal antibody raised against amino acids 1-214 representing full length 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.

APPLICATIONS

DREAM (FL-214) is recommended for detection of DREAM of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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 (FL-214) is also recommended for detection of DREAM in additional species, including canine and bovine.

Suitable for use as control antibody for DREAM siRNA (h): sc-42398, DREAM siRNA (m): sc-42399, DREAM shRNA Plasmid (h): sc-42398-SH, DREAM shRNA Plasmid (m): sc-42399-SH, DREAM shRNA (h) Lentiviral Particles: sc-42398-V and DREAM shRNA (m) Lentiviral Particles: sc-42399-V.

Molecular Weight of DREAM: 32 kDa.

Positive Controls: DREAM (h): 293 Lysate: sc-111016 or H4 cell lysate: sc-2408.

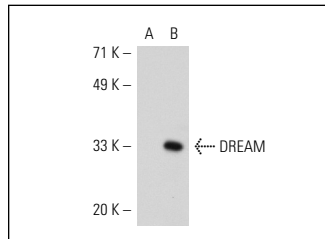
STORAGE

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

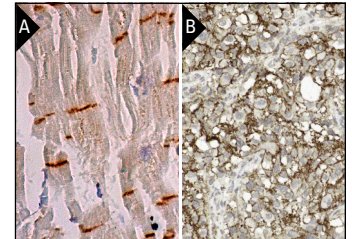
RESEARCH USE

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

DATA



DREAM (FL-214): sc-9142. Western blot analysis of DREAM expression in non-transfected: sc-110760 (A) and human DREAM transfected: sc-111016 (B) 293 whole cell lysates.



DREAM (FL-214): sc-9142. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing staining of intercalated disks (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human malignant melanoma tissue showing membrane staining of tumor cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

1. Ledo, F., et al. 2002. Ca^{2+} -dependent block of CREB-CBP transcription by repressor DREAM. *EMBO J.* 21: 4583-4592.
2. Cebolla, B., et al. 2008. DREAM mediates cAMP-dependent, Ca^{2+} -induced stimulation of GFAP gene expression and regulates cortical astroglialogenesis. *J. Neurosci.* 28: 6703-6713.
3. Fedrizzi, L., et al. 2008. Interplay of the Ca^{2+} -binding protein DREAM with presenilin in neuronal Ca^{2+} signaling. *J. Biol. Chem.* 283: 27494-27503.
4. Landa, I., et al. 2009. The variant rs1867277 in FOXE1 gene confers thyroid cancer susceptibility through the recruitment of USF1/USF2 transcription factors. *PLoS Genet.* 5: e1000637.
5. Fontán-Lozano, A., et al. 2009. Lack of DREAM protein enhances learning and memory and slows brain aging. *Curr. Biol.* 19: 54-60.
6. Nadin, B.M., et al. 2010. Dipeptidyl peptidase-like protein 6 is required for normal electrophysiological properties of cerebellar granule cells. *J. Neurosci.* 30: 8551-8565.
7. Jang, C., et al. 2011. Calsenilin is degraded by the ubiquitin-proteasome pathway. *Biochem. Biophys. Res. Commun.* 405: 180-185.
8. Massone, S., et al. 2011. RNA polymerase III drives alternative splicing of the potassium channel-interacting protein contributing to brain complexity and neurodegeneration. *J. Cell Biol.* 193: 851-866.


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Try **DREAM (A-9): sc-166916**, our highly recommended monoclonal alternative to DREAM (FL-214).