

DREAM (A-9): sc-166916

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.
3. Hurd, Y.L. 1996. Differential messenger RNA expression of prodynorphin and Proenkephalin in the human brain. *Neuroscience* 72: 767-783.

CHROMOSOMAL LOCATION

Genetic locus: KCNIP3 (human) mapping to 2q11.1; Kcnp3 (mouse) mapping to 2 F1.

SOURCE

DREAM (A-9) is a mouse monoclonal antibody raised against amino acids 1-214 representing full length DREAM of human origin.

PRODUCT

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

DREAM (A-9) is available conjugated to agarose (sc-166916 AC), 500 μg /0.25 ml agarose in 1 ml, for IP; to HRP (sc-166916 HRP), 200 μg /ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166916 PE), fluorescein (sc-166916 FITC), Alexa Fluor® 488 (sc-166916 AF488), Alexa Fluor® 546 (sc-166916 AF546), Alexa Fluor® 594 (sc-166916 AF594) or Alexa Fluor® 647 (sc-166916 AF647), 200 μg /ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166916 AF680) or Alexa Fluor® 790 (sc-166916 AF790), 200 μg /ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

DREAM (A-9) is recommended for detection of DREAM 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 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.

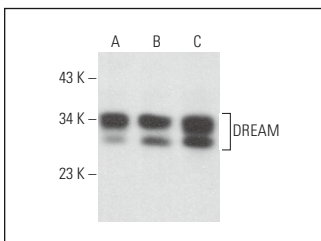
Molecular Weight of DREAM: 32 kDa.

Positive Controls: rat brain extract: sc-2392, mouse cerebellum extract: sc-2403 or rat cerebellum extract: sc-2398.

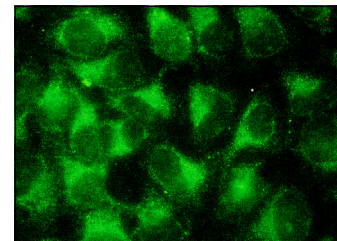
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



DREAM (A-9): sc-166916. Western blot analysis of DREAM expression in rat brain (A), mouse cerebellum (B) and rat cerebellum (C) tissue extracts.



DREAM (A-9): sc-166916. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Tian, N.X., et al. 2018. KChIP3 N-terminal 31-50 fragment mediates its association with TRPV1 and alleviates inflammatory hyperalgesia in rats. *J. Neurosci.* 38: 1756-1773.
2. Wang, W., et al. 2022. Fibroblast A20 governs fibrosis susceptibility and its repression by DREAM promotes fibrosis in multiple organs. *Nat. Commun.* 13: 6358.

RESEARCH USE

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