

Freud-1 (K-19): sc-79482

BACKGROUND

Freud-1 (five repressor element under dual repression-binding protein 1), also known as CC2D1A (coiled-coil and C2 domain-containing protein 1A) or MRT3, is a 951 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one C2 domain. Existing as three alternatively spliced isoforms, Freud-1 functions as a transcription factor that binds specifically to the five repressor element (FRE) and, via this binding, represses the transcription of SR-1A in neuronal cells. Due to its influence on SR-1A transcription, Freud-1 may be associated with the development of anxiety and major depression. Defects in the gene encoding Freud-1 are the cause of non-syndromic mental retardation autosomal recessive type 3 (MRT3), which is characterized by severe mental retardation and psychomotor development delay in early childhood.

REFERENCES

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3. Basel-Vanagaite, L., et al. 2006. The CC2D1A, a member of a new gene family with C2 domains, is involved in autosomal recessive non-syndromic mental retardation. *J. Med. Genet.* 43: 203-210.
4. Basel-Vanagaite, L., et al. 2007. Genetic screening for autosomal recessive nonsyndromic mental retardation in an isolated population in Israel. *Eur. J. Hum. Genet.* 15: 250-253.
5. Rogava, A. and Albert, P.R. 2007. The mental retardation gene CC2D1A/Freud-1 encodes a long isoform that binds conserved DNA elements to repress gene transcription. *Eur. J. Neurosci.* 26: 965-974.
6. Rogava, A., et al. 2007. Differential repression by Freud-1/CC2D1A at a polymorphic site in the dopamine-D2 receptor gene. *J. Biol. Chem.* 282: 20897-20905.
7. Rogava, A., et al. 2007. The Freud-1/CC2D1A family: transcriptional regulators implicated in mental retardation. *J. Neurosci. Res.* 85: 2833-2838.

CHROMOSOMAL LOCATION

Genetic locus: CC2D1A (human) mapping to 19p13.12; Cc2d1a (mouse) mapping to 8 C3.

SOURCE

Freud-1 (K-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Freud-1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-79482 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Freud-1 (K-19) is recommended for detection of Freud-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Freud-1 (K-19) is also recommended for detection of Freud-1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Freud-1 siRNA (h): sc-75065, Freud-1 siRNA (m): sc-75066, Freud-1 shRNA Plasmid (h): sc-75065-SH, Freud-1 shRNA Plasmid (m): sc-75066-SH, Freud-1 shRNA (h) Lentiviral Particles: sc-75065-V and Freud-1 shRNA (m) Lentiviral Particles: sc-75066-V.

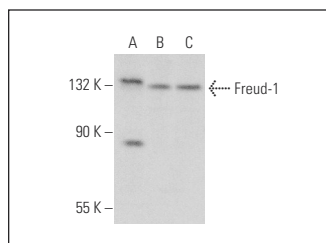
Molecular Weight of Freud-1: 104 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176, A549 cell lysate: sc-2413 or Hep G2 cell lysate: sc-2227.

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) Immunoprecipitation: use Protein A/G PLUS-agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Freud-1 (K-19): sc-79482. Western blot analysis of Freud-1 expression in U-251-MG (A), A549 (B) and Hep G2 (C) 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.