

RAI1 (D-11): sc-365065

BACKGROUND

Retinoic acid induced 1 (RAI1) is a 1,906 amino acid protein containing an N-terminal polyglutamine stretch that is expressed in most tissues, with highest expression in neuronal tissues. RAI1 functions as a transcriptional regulator and is important for embryonic and postnatal developments. Heterozygous deletions of the RAI1 gene are associated with Smith-Magenis syndrome (SMS), a mental retardation syndrome with behavioral, neurological and skeletal anomalies. Individuals affected with SMS usually display self-injurious behaviors, sleep disturbance, developmental delay and reduced motor and cognitive skills. RAI1 haploinsufficiency is specifically responsible for the obesity and craniofacial symptoms of SMS. RAI1 mutations have also been implicated in schizophrenia and spinocerebellar ataxia type 2.

REFERENCES

1. Rebohle, E., et al. 1977. Results of additional studies on the performance-diagnostic screening test. *Z. Gesamte Hyg.* 23: 896-899.
2. Hayes, S., et al. 2000. CAG repeat length in RAI1 is associated with age at onset variability in spinocerebellar ataxia type 2 (SCA2). *Hum. Mol. Genet.* 9: 1753-1758.
3. Slager, R.E., et al. 2003. Mutations in RAI1 associated with Smith-Magenis syndrome. *Nat. Genet.* 33: 466-468.
4. Toulouse, A., et al. 2003. Molecular cloning and characterization of human RAI1, a gene associated with schizophrenia. *Genomics* 82: 162-171.

CHROMOSOMAL LOCATION

Genetic locus: RAI1 (human) mapping to 17p11.2; Rai1 (mouse) mapping to 11 B1.3.

SOURCE

RAI1 (D-11) is a mouse monoclonal antibody raised against amino acids 6-275 mapping near the N-terminus of RAI1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RAI1 (D-11) is available conjugated to agarose (sc-365065 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365065 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365065 PE), fluorescein (sc-365065 FITC), Alexa Fluor® 488 (sc-365065 AF488), Alexa Fluor® 546 (sc-365065 AF546), Alexa Fluor® 594 (sc-365065 AF594) or Alexa Fluor® 647 (sc-365065 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365065 AF680) or Alexa Fluor® 790 (sc-365065 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, RAI1 (D-11) is available conjugated to biotin (sc-365065 B), 200 µg/ml, for WB, IHC(P) and ELISA.

STORAGE

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

APPLICATIONS

RAI1 (D-11) is recommended for detection of RAI1 isoforms 1, 2, 3 and 4 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 RAI1 siRNA (h): sc-61438, RAI1 siRNA (m): sc-61439, RAI1 shRNA Plasmid (h): sc-61438-SH, RAI1 shRNA Plasmid (m): sc-61439-SH, RAI1 shRNA (h) Lentiviral Particles: sc-61438-V, and RAI1 shRNA (m) Lentiviral Particles: sc-61439-V.

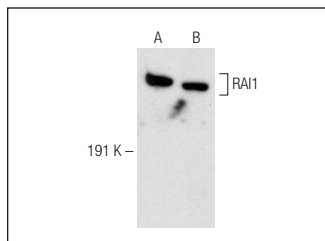
Molecular Weight of RAI1: 203 kDa.

Positive Controls: BE (2)-M17 whole cell lysate: sc-364358 or Hs 181 Tes whole cell lysate: sc-364779.

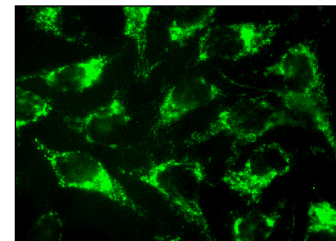
RECOMMENDED SUPPORT REAGENTS

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



RAI1 (D-11): sc-365065. Western blot analysis of RAI1 expression in BE (2)-M17 (A) and HS 181.Tes (B) whole cell lysates.



RAI1 (D-11): sc-365065. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Sun, X., et al. 2014. Phosphorodiamidate morpholino oligomers suppress mutant Huntingtin expression and attenuate neurotoxicity. *Hum. Mol. Genet.* 23: 6302-6317.
2. Fragoso, Y.D., et al. 2015. Expression in the human brain of retinoic acid induced 1, a protein associated with neurobehavioural disorders. *Brain Struct. Funct.* 220: 1195-1203.

RESEARCH USE

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

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