SANTA CRUZ BIOTECHNOLOGY, INC.

EYA4 (E-11): sc-393111

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

A gene of chromosome 6q23.2 encodes the 640 amino acid protein, EYA4 (eyes absent). EYA is one of four members of the eyes absent family. A 271 amino acid domain at the carboxyl terminal is highly conserved amongst the members of the eyes absent family. EYA4 is expressed in the craniofacial mesenchyme, the dermamyotome, and the limb. The conserved region in other EYA proteins interacts with SIX, DACH, and G proteins, which regulate transcription in early embryonic development. SIX translocates EYA1-3 to the nucleus, and G proteins can stop this interaction. Premature stop codon mutations in EYA4 cause postlingual, progressive autosomal dominant hearing loss in humans. This shows that EYA4 is also vital to the mature organ of Corti. EYA4 may cause oculo-dento-digital syndrome, based on its expression pattern and map postion.

REFERENCES

1. Borsani, G., et al. 1999. EYA4, a novel vertebrate gene related to *Drosophila* eyes absent. Hum. Mol. Genet. 8: 11-23.
2. Ohto, H., et al. 1999. Cooperation of six and eya in activation of their target genes through nuclear translocation of Eya. Mol. Cell. Biol. 19: 6815-6824.
3. Heanue, T.A., et al. 1999. Synergistic regulation of vertebrate muscle development by Dach2, EYA2, and Six1, homologs of genes required for *Drosophila* eye formation. Genes Dev. 13: 3231-3243.

CHROMOSOMAL LOCATION

Genetic locus: EYA4 (human) mapping to 6q23.2; Eya4 (mouse) mapping to 10 A3.

SOURCE

EYA4 (E-11) is a mouse monoclonal antibody raised against amino acids 153-276 mapping within an internal region of EYA4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

EYA4 (E-11) is available conjugated to agarose (sc-393111 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393111 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393111 PE), fluorescein (sc-393111 FITC), Alexa Fluor® 488 (sc-393111 AF488), Alexa Fluor® 546 (sc-393111 AF546), Alexa Fluor® 594 (sc-393111 AF594) or Alexa Fluor® 647 (sc-393111 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393111 AF680) or Alexa Fluor® 790 (sc-393111 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

EYA4 (E-11) is recommended for detection of EYA4 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), 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).

EYA4 (E-11) is also recommended for detection of EYA4 in additional species, including bovine and porcine.

Suitable for use as control antibody for EYA4 siRNA (h): sc-41952, EYA4 siRNA (m): sc-41953, EYA4 shRNA Plasmid (h): sc-41952-SH, EYA4 shRNA Plasmid (m): sc-41953-SH, EYA4 shRNA (h) Lentiviral Particles: sc-41952-V and EYA4 shRNA (m) Lentiviral Particles: sc-41953-V.

Molecular Weight (predicted) of EYA4: 70 kDa.

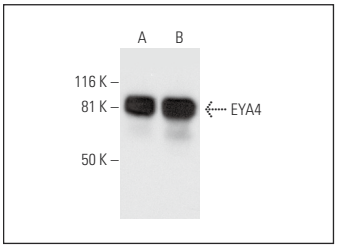
Molecular Weight (observed) of EYA4: 86-90 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or A2058 whole cell lysate: sc-364178.

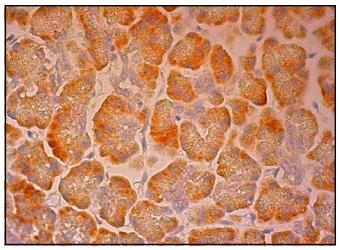
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



EYA4 (E-11): sc-393111. Western blot analysis of EYA4 expression in HeLa (**A**) and A2058 (**B**) whole cell lysates.



EYA4 (E-11): sc-393111. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells.

RESEARCH USE

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