



## EYA1 (E-20): sc-15095

### BACKGROUND

A gene on chromosome 8q13.3 encodes EYA1 (eyes absent), a protein with 16 exons. EYA1 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, while the PST (proline-serine-threonine)-rich amino terminal is highly divergent. EYA is expressed in flexor tendons and the developing central nervous system, kidney, eye and ear. EYA1 acts as a transcriptional activator in connective tissue patterning through its PST domain, which functions as a transactivation domain. EYA1 plays a critical role in the development of the inner ear and kidney. EYA is involved in early inductive signaling, acting upstream of GDNF. EYA1 has been implicated in the autosomal dominant disorders branchio-oto-renal (BOR) syndrome and branchio-oto (BO) syndrome.

### REFERENCES

1. Abdelhak, S., et al. 1997. Clustering of mutations responsible for branchio-oto-renal (BOR) syndrome in the eyes absent homologous region (eyaHR) of EYA1. *Mol. Genet.* 6: 2247-2255.
2. Abdelhak, S., et al. 1997. A human homologue of the *Drosophila* eyes absent gene underlies branchio-oto-renal (BOR) syndrome and identifies a novel gene family. *Nat. Genet.* 15: 157-164
3. Xu, P.X., et al. 1997. Mouse eya genes are expressed during limb tendon development and encode a transcriptional activation function. *Proc. Nat. Acad. Sci. USA* 94: 11974-11979.
4. Xu, P.X., et al. 1997. Mouse eya homologues of the *Drosophila* eyes absent gene require Pax6 for expression in lens and nasal placode. *Development* 124: 219-231.
5. Borsani, G., et al. 1999. EYA4, a novel vertebrate gene related to *Drosophila* eyes absent. *Hum. Mol. Genet.* 8:11-23.
6. Xu, P.X., et al. 1999. Eya1-deficient mice lack ears and kidneys and show abnormal apoptosis of organ primordia. *Nat Genet.* 23: 113-117.

### CHROMOSOMAL LOCATION

Genetic locus: EYA1 (human) mapping to 8q13.3; Eya1 (mouse) mapping to 1 A3.

### SOURCE

EYA1 (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of EYA1 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-15094 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

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

### APPLICATIONS

EYA1 (E-20) is recommended for detection of EYA1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

EYA1 (L-19) is also recommended for detection of EYA1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for EYA1 siRNA (h): sc-41946, EYA1 siRNA (m): sc-41946, EYA1 shRNA Plasmid (h): sc-41946-SH, EYA1 shRNA Plasmid (m): sc-41946-SH, EYA1 shRNA (h) Lentiviral Particles: sc-41946-V and EYA1 shRNA (m) Lentiviral Particles: sc-41946-V.

### 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) 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.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.