# NR2E3 (N-13): sc-46209



The Power to Question

### **BACKGROUND**

Photoreceptor-specific nuclear receptor, also known as NR2E3 or PNR, belongs to a large family of nuclear hormone receptor transcription factors. The proteins belonging to this family are characterized by discrete domains functioning in DNA and ligand binding. NR2E3 has a role in regulating the signaling pathway elemental to the photoreceptor cell function and in regulating pathways involved in embryonic development. NR2E3 is an eye specific nuclear protein found in the outer nuclear layer of the adult retina (where the nuclei of cone and ROD photoreceptors are located). Defects in this gene encoding for the protein, which localizes to chromosome 15q22.32, cause enhanced S cone syndrome.

## **REFERENCES**

- Flipse, R.C., et al. 1968. Sequential brain scanning in radiation therapy of malignant tumors of the brain. Am. J. Roentgenol. Radium Ther. Nucl. Med. 102: 93-96.
- Bowes, C., et al. 1989. Isolation of a candidate cDNA for the gene causing retinal degeneration in the rd mouse. Proc. Natl. Acad. Sci. USA 86: 9722-9726.
- Kobayashi, M., et al. 1999. Identification of a photoreceptor cell-specific nuclear receptor. Proc. Natl. Acad. Sci. USA 96: 4814-4819.
- Akhmedov, N.B., et al. 2000. A deletion in a photoreceptor-specific nuclear receptor mRNA causes retinal degeneration in the rd7 mouse. Proc. Natl. Acad. Sci. USA 97: 5551-5556.
- Rendtorff, N.D., et al. 2000. Assignment of the NR2E3 gene to mouse chromosome 9 and to human chromosome 15q22.33→q23. Cytogenet. Cell Genet. 89: 279-280.
- Haider, N.B., et al. 2001. Excess cone cell proliferation due to lack of a functional NR2E3 causes retinal dysplasia and degeneration in rd7/rd7 mice. Hum. Mol. Genet. 10: 1619-1626.
- Milam, A.H., et al. 2002. The nuclear receptor NR2E3 plays a role in human retinal photoreceptor differentiation and degeneration. Proc. Natl. Acad. Sci. USA 99: 473-478.
- 8. Bumsted O'Brien, K.M., et al. 2004. Expression of photoreceptor-specific nuclear receptor NR2E3 in ROD photoreceptors of fetal human retina. Invest. Ophthalmol. Vis. Sci. 45: 2807-2812.
- Cheng, H., et al. 2004. Photoreceptor-specific nuclear receptor NR2E3 functions as a transcriptional activator in ROD photoreceptors. Hum. Mol. Genet. 13:1563-1575.

### **CHROMOSOMAL LOCATION**

Genetic locus: NR2E3 (human) mapping to 15q22.32.

### **SOURCE**

NR2E3 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of NR2E3 of human origin.

#### **PRODUCT**

Each vial contains 200  $\mu g$  IgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-46209 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-46209 X, 200  $\mu$ g/0.1 ml.

### **APPLICATIONS**

NR2E3 (N-13) is recommended for detection of NR2E3 of 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).

Suitable for use as control antibody for NR2E3 siRNA (h): sc-45726, NR2E3 shRNA Plasmid (h): sc-45726-SH and NR2E3 shRNA (h) Lentiviral Particles: sc-45726-V.

NR2E3 (N-13) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of NR2E3: 42 kDa.

### **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) with UltraCruz™ Mounting Medium: sc-24941.

## **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.

## **PROTOCOLS**

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **NR2E3 (B-4):** sc-374513, our highly recommended monoclonal alternative to NR2E3 (N-13).