

DNER (C-20): sc-54183

BACKGROUND

DNER (δ -notch-like EGF-related receptor), also known as δ -notch-like EGF repeat-containing transmembrane protein, is a neuron-specific, atypical Notch ligand expressed in dendrites and cell bodies of neurons throughout the central nervous system. DNER contains ten extracellular EGF-like domains that are highly homologous to those of the Notch ligand, Delta. In the cerebellum, DNER is predominantly expressed in Purkinje cells. DNER mediates neuron-glia interaction during astrocytogenesis through a direct interaction with Notch 1 at Purkinje cell/Bergmann glia contacts. This interaction activates a Deltex-dependent Notch signaling pathway in Bergmann glia and may regulate Bergmann glial morphogenesis. DNER is crucial for the functional and morphological maturation of Bergmann glia. DNER-knockout mice are characterized by motor discoordination and cerebellum retardation in morphogenesis.

REFERENCES

- Eiraku, M., et al. 2002. Delta/Notch-like epidermal growth factor (EGF)-related receptor, a novel EGF-like repeat-containing protein targeted to dendrites of developing and adult central nervous system neurons. *J. Biol. Chem.* 277: 25400-25407.
- Eiraku, M., et al. 2005. DNER acts as a neuron-specific Notch ligand during Bergmann glial development. *Nat. Neurosci.* 8: 873-880.
- Subramanian, S., et al. 2005. The gene expression profile of extraskeletal myxoid chondrosarcoma. *J. Pathol.* 206: 433-444.
- Tohgo, A., et al. 2006. Impaired cerebellar functions in mutant mice lacking DNER. *Mol. Cell. Neurosci.* 31: 326-333.
- Saito, S.Y. and Takeshima, H. 2006. DNER as key molecule for cerebellar maturation. *Cerebellum* 5: 227-231.
- Katoh, M. and Katoh, M. 2006. Notch signaling in gastrointestinal tract. *Int. J. Oncol.* 30: 247-251.
- Souilhol, C., et al. 2006. Nas transgenic mouse line allows visualization of Notch pathway activity *in vivo*. *Genesis* 44: 277-286.
- Patten, B.A., et al. 2006. Notch 1 signaling regulates radial glia differentiation through multiple transcriptional mechanisms. *J. Neurosci.* 26: 3102-3108.
- Stahl, S., et al. 2007. Proteomic analysis of cathepsin B and L-deficient mouse brain lysosomes. *Biochim. Biophys. Acta* 1774: 1237-1246.

CHROMOSOMAL LOCATION

Genetic locus: DNER (human) mapping to 2q36.3; Dner (mouse) mapping to 1 C5.

SOURCE

DNER (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of DNER of human origin.

RESEARCH USE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-54183 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DNER (C-20) is recommended for detection of DNER 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).

DNER (C-20) is also recommended for detection of DNER in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for DNER siRNA (h): sc-106901, DNER siRNA (m): sc-143123, DNER shRNA Plasmid (h): sc-106901-SH, DNER shRNA Plasmid (m): sc-143123-SH, DNER shRNA (h) Lentiviral Particles: sc-106901-V and DNER shRNA (m) Lentiviral Particles: sc-143123-V.

Molecular Weight of DNER: 90 kDa.

Positive Controls: PC-12 cell lysate: sc-2250.

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.

STORAGE

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

PROTOCOLS

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



Try **DNER (YY-7): sc-100305**, our highly recommended monoclonal alternative to DNER (C-20).