SANTA CRUZ BIOTECHNOLOGY, INC.

RYK (A-19): sc-83079

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The Power to Question

BACKGROUND

RYK (related to receptor tyrosine kinase) is a chemorepulsive axon guidance receptor required for establishing major axon tracts, such as the corticospinal tract and the corpus callosum, in the developing nervous system. RYK belongs to the RTK family and is ubiquitously expressed in both developing and adult tissues. Compared to other RTK family members, RYK has a relatively short extracellular domain. In addition, RYK contains two N-terminal leucine-rich motifs that resemble the N-terminal domain of WIF-1. RYK functions as a Wnt receptor and produces a repulsive guidance signal upon binding of Wnt-1, 3, 3a or 5a to its WIF-like domain. The loss of functional RYK results in the formation of contralateral axon bundles and the disruption of cardiac, skeletal and craniofacial development, ultimately resulting in perinatal death. RYK is also strongly expressed in malignant ovarian tumors and may play a role in tumorigenesis.

REFERENCES

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4. Halford, M.M. and Stacker, S.A. 2001. Revelations of the RYK receptor. Bioessays 23: 34-45.
5. Trivier, E. and Ganesan, T.S. 2002. RYK, a catalytically inactive receptor tyrosine kinase, associates with EphB2 and EphB3 but does not interact with AF-6. J. Biol. Chem. 277: 23037-23043.
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8. Schmitt, A.M., et al. 2006. Wnt-RYK signalling mediates medial-lateral retinotectal topographic mapping. Nature. 439: 31-37.
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CHROMOSOMAL LOCATION

Genetic locus: RYK (human) mapping to 3q22.2; RYK (mouse) mapping to 9 F1.

SOURCE

RYK (A-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of RYK of mouse origin.

STORAGE

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

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-83079 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RYK (A-19) is recommended for detection of RYK 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).

Suitable for use as control antibody for RYK siRNA (h): sc-72221, RYK siRNA (m): sc-72222, RYK shRNA Plasmid (h): sc-72221-SH, RYK shRNA Plasmid (m): sc-72222-SH, RYK shRNA (h) Lentiviral Particles: sc-72221-V and RYK shRNA (m) Lentiviral Particles: sc-72222-V.

Molecular Weight of RYK: 90 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) 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 or our catalog for detailed protocols and support products.