SANTA CRUZ BIOTECHNOLOGY, INC.

Rev-erbβ (QK-6): sc-100911

BACKGROUND

Orphan nuclear receptors NR1D1 and NR1D2 are more commonly designated Rev-erbα and Rev-erbβ, respectively. Rev-erbα acts as a receptor for tri-iodothyronine and is composed of three domains: a modulating N-terminal domain, a C-terminal steroid binding domain and a DNA-binding domain. Rev-erbβ binds to the sequences 5'-AATGTAGGTCA-3' and 5'-ATAACTAGGT-CA-3' and acts as a competitive repressor of RORα function. It interacts with NCoA-5 co-activator, which leads to an increase in transcription. Both Rev-erbα and Rev-erbβ are nuclear proteins belonging to the nuclear hormone receptor family of proteins.

REFERENCES

1. Laudet, V., Begue, A., Henry-Duthoit, C., Joubel, A., Martin, P., Stehelin, D. and Saule, S. 1991. Genomic organization of the human thyroid hormone receptor α (c-ErbA-1) gene. Nucleic Acids Res. 19: 1105-1112.
2. Dumas, B., Harding, H.P., Choi, H.S., Lehmann, K.A., Chung, M., Lazar, M.A. and Moore, D.D. 1995. A new orphan member of the nuclear hormone receptor superfamily closely related to Rev-erβ. Mol. Endocrinol. 8: 996-1005.
3. Kainu, T., Enmark, E., Gustafsson, J.A. and Pelto-Huikko, M.P. 1996. Localization of the Rev-erbα orphan receptors in the brain. Brain Res. 743: 315-319.
4. Zhao, Q., Khorasanizadeh, S., Miyoshi, Y., Lazar, M.A. and Rastinejad, F. 1998. Structural elements of an orphan nuclear receptor-DNA complex. Mol. Cell 1: 849-861.
5. Koh, Y.S and Moore, D.D.1999. Linkage of the nuclear hormone receptor genes NR1D2, THRB, and RARB: evidence for an ancient, large-scale duplication. Genomics 57: 289-292.

6 Sauvé, F., McBroom, L.D., Gallant, J., Moraitis, A.N., Labrie, F. and Giguère, V. 2001. CIA, a interacting determinant. Mol. Cell. Biol. 21: 343-353.

7. Kamphuis, W., Cailotto, C., Dijk, F., Bergen, A. and Buijs, R.M. 2005. Circadian expression of clock genes and clock-controlled genes in the rat retina. Biochem. Biophys. Res. Commun. 330: 18-26.

CHROMOSOMAL LOCATION

Genetic locus: NR1D2 (human) mapping to 3q24.2.

SOURCE

Rev-erbβ (QK-6) is a mouse monoclonal antibody raised against recombinant Rev-erbβ of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Rev-erbβ (QK-6) is recommended for detection of Rev-erbβ of human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Rev-erbβ siRNA (h): sc-61456, Rev-erbβ shRNA Plasmid (h): sc-61456-SH and Rev-erbβ shRNA (h) Lentiviral Particles: sc-61456-V.

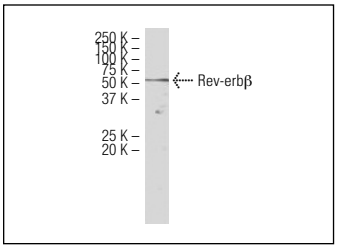
Molecular Weight of Rev-erbβ: 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

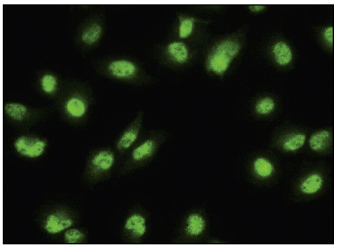
RECOMMENDED SUPPORT REAGENTS

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, TBS Blotto A Blocking Reagent: sc-2333 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.

DATA



Rev-erbβ (QK-6): sc-100911. Western blot analysis of Rev-erbβ expression in HeLa whole cell lysate.



Rev-erbβ (QK-6): sc-100911. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization.

RESEARCH USE

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

PROTOCOLS

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