

# Biotin (39-15D9): sc-57636

## BACKGROUND

Biotin, a water-soluble B complex vitamin, is required by all organisms but can only be synthesized by yeasts, molds, algae, some plant species and bacteria. Biotin, a tetrahydrothiophene ring fused with an ureido (tetrahydro-imidazole) ring, is important in the catalysis of essential metabolic reactions to synthesize fatty acids, to metabolize leucine and in gluconeogenesis. Human intestinal bacteria generally produce in excess of the body's daily Biotin requirement. The occurrence of Biotin in nature is widespread and, although extremely rare, Biotin deficiency is associated with dermatitis, nausea, loss of hair, depression, muscle pain and reproductive disturbances.

## SOURCE

Biotin (39-15D9) is a mouse monoclonal antibody raised against full length Biotin.

## PRODUCT

Each vial contains 50 µg IgG<sub>2b</sub> kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Biotin (39-15D9) is recommended for detection of Biotin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:100), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:2500), immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:2500) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:100-1:5000); permits the formation of antibody-Biotin complexes, thus enhancing the sensitivity of the detection system; non cross-reactive with the free carrier protein.

## 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, UltraCruz® Blocking Reagent: sc-516214 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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## STORAGE

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

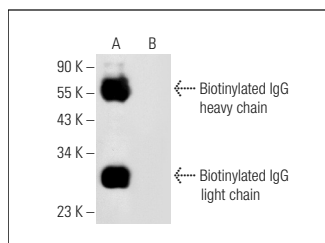
## PROTOCOLS

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

## RESEARCH USE

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

## DATA



Biotin (39-15D9): sc-57636. Western blot analysis of Biotin conjugated goat IgG (A) and normal goat IgG (B).

## SELECT PRODUCT CITATIONS

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- Fang, D., et al. 2017. Simvastatin augments activation of liver regeneration through attenuating transforming growth factor-β1 induced-apoptosis in obstructive jaundice rats. *Exp. Ther. Med.* 14: 4839-4845.
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- Park, S.H., et al. 2019. ATAD5 promotes replication restart by regulating Rad51 and PCNA in response to replication stress. *Nat. Commun.* 10: 5718.
- Ting, C.H., et al. 2019. FOSB-PCDHB13 axis disrupts the microtubule network in non-small cell lung cancer. *Cancers* 11: 107.
- Sidwell, T., et al. 2020. Attenuation of TCR-induced transcription by BACH2 controls regulatory T cell differentiation and homeostasis. *Nat. Commun.* 11: 252.
- Vieira, J.S., et al. 2020. Alendronate disturbs femoral growth due to changes during immunolocalization of transforming growth factor-β1 and bone morphogenetic protein-2 in epiphyseal plate. *World J. Exp. Med.* 10: 1-9.
- Su, B.C., et al. 2020. Antimicrobial peptide TP4 targets mitochondrial adenine nucleotide translocator 2. *Mar. Drugs* 18: 417.

## CONJUGATES

See **Biotin (BK-1/39): sc-53179** for Biotin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.