

#5597 Store at -20C

Anti-biotin (D5A7) Rabbit mAb

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Applications:
WB, E-PReactivity:
RabSource/Isotype:
Rabbit IgGProduct Usage
Information

Recommended Antibody Dilutions:

ELISA-peptide 1:1000

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% Glycerol and less than 0.02% sodium azide.

Store at -20C. Do not aliquot antibody.

Specificity / Sensitivity

Anti-Biotin (D5A7) Rabbit mAb recognizes biotin attached to proteins, peptides, oligonucleotides, or solid matrices.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a biotinylated protein.

Background

Biotin is a water-soluble B complex vitamin (vitamin H or B7) that serves as a coenzyme in various metabolic functions. It transfers carbon dioxide for five carboxylase enzymes and is involved in the TCA cycle and gluconeogenesis. In addition, all cells require biotin for cell proliferation, production of fatty acids, and metabolism of fats and amino acids (1). Biotin recycling and attachment to histone proteins is catalyzed by an enzyme named biotinidase. Histone biotinylation is involved in regulating telomere attrition and cellular senescence. Biotinidase deficiency is a rare genetic disorder that can cause neurological and cutaneous symptoms if left untreated (2). Biotin has a high affinity for its natural ligand, avidin. The complex and irregular structure of the biotin-binding site makes it highly optimized for biotin binding and confers great specificity to the avidin-biotin complexes (3). This remarkable affinity has been exploited for numerous immunoassays, including ELISA, Flow Cytometry, Immunofluorescence, In Situ Hybridization, Affinity Chromatography, and Immunohistochemistry. Anti-biotin (D5A7) Rabbit mAb #5597 can be used as an alternative to avidins in order to minimize background and maximize signal intensity.

Background References

1. Zemleni, J. et al. (2010) *Biofactors* 35, 36-46.
2. Pindolia, K. et al. (2011) *Mol Genet Metab* 102, 161-9.
3. Reznik, G.O. et al. (1998) *Proc Natl Acad Sci U S A* 95, 13525-30.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **E-P:** Peptide ELISA (DELFA)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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