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## MITF (D3B4T) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IF-IC, ChIP, ChIP-seq, C&R, C&T	H M Mk	Endogenous	50-75	Rabbit IgG	#O75030	4286

### Product Usage Information

For optimal ChIP and ChIP-seq results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10<sup>6</sup> cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

The CUT&Tag dilution was determined using CUT&Tag Assay Kit #77552.

Application	Dilution
Western Blotting	1:1000
Immunofluorescence (Immunocytochemistry)	1:100 - 1:200
Chromatin IP	1:50
Chromatin IP-seq	1:50
CUT&RUN	1:50
CUT&Tag	1:50

### Specificity / Sensitivity

MITF (D3B4T) Rabbit mAb recognizes endogenous levels of total MITF protein.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the carboxy terminus of human MITF protein.

### Background

Microphthalmia-associated transcription factor (MITF) is a basic helix-loop-helix leucine zipper transcription factor that is most widely known for its roles in melanocyte, ophthalmic, and osteoclast development (1-3). In humans, MITF can function as a melanoma oncogene (4) and mutations in the corresponding *MITF* gene are associated with Waardenburg syndrome type 2, an auditory-pigmentary syndrome characterized by developmental defects in cells derived from neural crest (5). At least 12 isoforms of MITF have been identified, which exhibit differential patterns of expression among cell and tissue types (6).

### Background References

- Hershey, C.L. and Fisher, D.E. (2004) *Bone* 34, 689-96.
- Nomura, S. et al. (2001) *J Bone Miner Metab* 19, 183-7.
- Widlund, H.R. and Fisher, D.E. (2003) *Oncogene* 22, 3035-41.
- Levy, C. et al. (2006) *Trends Mol Med* 12, 406-14.
- Read, A.P. and Newton, V.E. (1997) *J Med Genet* 34, 656-65.
- Tachibana, M. (2000) *Pigment Cell Res* 13, 230-40.

### 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 **IF-IC:** Immunofluorescence (Immunocytochemistry) **ChIP:** Chromatin IP  
**ChIP-seq:** Chromatin IP-seq **C&R:** CUT&RUN **C&T:** CUT&Tag

### 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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