

#12590 Store at -20°C

**MITF (D5G7V) Rabbit mAb****Cell Signaling**  
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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, ChIP, ChIP-seq	H M R Hm 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.

Application	Dilution
Western Blotting	1:1000
Chromatin IP	1:50
Chromatin IP-seq	1:50

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity / Sensitivity**

MITF (D5G7V) Rabbit mAb recognizes endogenous levels of total MITF protein. The antibody is predicted to recognize all known isoforms of MITF. Based on sequence similarities and testing with exogenously expressed TFE3 samples, this antibody may also detect the related MIT/TEF protein family member TFE3.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly335 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**

1. Hershey, C.L. and Fisher, D.E. (2004) *Bone* 34, 689-96.
2. Nomura, S. et al. (2001) *J Bone Miner Metab* 19, 183-7.
3. Widlund, H.R. and Fisher, D.E. (2003) *Oncogene* 22, 3035-41.
4. Levy, C. et al. (2006) *Trends Mol Med* 12, 406-14.
5. Read, A.P. and Newton, V.E. (1997) *J Med Genet* 34, 656-65.
6. 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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**WB:** Western Blotting **ChIP:** Chromatin IP **ChIP-seq:** Chromatin IP-seq

**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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