

Anti-MITF Antibody (aa150-427, clone ABM1H91)
Mouse Anti Human Monoclonal Antibody
Catalog # ALS17391

Specification

Anti-MITF Antibody (aa150-427, clone ABM1H91) - Product Information

Application	WB, IHC-P
Primary Accession	O75030
Predicted	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1,k
Calculated MW	58795

Anti-MITF Antibody (aa150-427, clone ABM1H91) - Additional Information

Gene ID 4286

Alias Symbol **MITF**
Other Names
MITF, BHLHe32, CMM8, MI, Waardenburg syndrome, type 2A, WS2, WS2A

Reconstitution & Storage

PBS, 0.05% sodium azide. Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze-thaw cycles.

Precautions

Anti-MITF Antibody (aa150-427, clone ABM1H91) is for research use only and not for use in diagnostic or therapeutic procedures.

Anti-MITF Antibody (aa150-427, clone ABM1H91) - Protein Information

Name MITF {ECO:0000303|PubMed:8069297, ECO:0000312|HGNC:HGNC:7105}

Function

Transcription factor that acts as a master regulator of melanocyte survival and differentiation as well as melanosome biogenesis (PubMed: [10587587](http://www.uniprot.org/citations/10587587) target="_blank">10587587, PubMed: [22647378](http://www.uniprot.org/citations/22647378) target="_blank">22647378, PubMed: [27889061](http://www.uniprot.org/citations/27889061) target="_blank">27889061, PubMed: [9647758](http://www.uniprot.org/citations/9647758) target="_blank">9647758). Binds to M-boxes (5'-TCATGTG-3') and symmetrical DNA sequences (E-boxes) (5'-CACGTG-3') found in the promoter of pigmentation genes, such as tyrosinase (TYR) (PubMed: [10587587](http://www.uniprot.org/citations/10587587) target="_blank">10587587, PubMed: [22647378](http://www.uniprot.org/citations/22647378) target="_blank">22647378, PubMed: [27889061](http://www.uniprot.org/citations/27889061) target="_blank">27889061, PubMed: [9647758](http://www.uniprot.org/citations/9647758) target="_blank">9647758). Involved in the cellular response to amino acid availability by acting downstream of MTOR: in the presence of nutrients, MITF phosphorylation by MTOR

promotes its inactivation (PubMed:36608670). Upon starvation or lysosomal stress, inhibition of MTOR induces MITF dephosphorylation, resulting in transcription factor activity (PubMed:36608670). Plays an important role in melanocyte development by regulating the expression of tyrosinase (TYR) and tyrosinase-related protein 1 (TYRP1) (PubMed:10587587, PubMed:22647378, PubMed:27889061, PubMed:9647758). Plays a critical role in the differentiation of various cell types, such as neural crest-derived melanocytes, mast cells, osteoclasts and optic cup-derived retinal pigment epithelium (PubMed:10587587, PubMed:22647378, PubMed:27889061, PubMed:9647758).

Cellular Location

Nucleus. Cytoplasm. Lysosome membrane Note=When nutrients are present, recruited to the lysosomal membrane via association with GDP-bound RagC/RRAGC (or RagD/RRAGD): it is then phosphorylated by MTOR (PubMed:23401004, PubMed:36608670) Phosphorylation by MTOR promotes ubiquitination and degradation (PubMed:36608670). Conversely, inhibition of mTORC1, starvation and lysosomal disruption, promotes dephosphorylation and translocation to the nucleus (PubMed:36608670). Phosphorylation by MARK3/cTAK1 promotes association with 14-3-3/YWHA adapters and retention in the cytosol (PubMed:16822840).

Tissue Location

Expressed in melanocytes (at protein level). [Isoform C2]: Expressed in the kidney and retinal pigment epithelium. [Isoform H2]: Expressed in the kidney. [Isoform Mdel]: Expressed in melanocytes.

Anti-MITF Antibody (aa150-427, clone ABM1H91) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-MITF Antibody (aa150-427, clone ABM1H91) - Images