

# Anti-MITF Antibody

Catalog # AP95948

## Product Information

|                   |                        |
|-------------------|------------------------|
| Application       | WB, FC                 |
| Primary Accession | <a href="#">O75030</a> |
| Reactivity        | Human                  |
| Host              | Mouse                  |
| Clonality         | Monoclonal             |
| Calculated MW     | 58795                  |

## Additional Information

|                    |                                                                                                               |
|--------------------|---------------------------------------------------------------------------------------------------------------|
| Gene ID            | 4286                                                                                                          |
| Other Names        | BHLHE32; MIC, rophthamia-associated transcription factor; Class E basIC, helix-loop-helix protein 32; bHLHe32 |
| Target/Specificity | Recombinant fusion protein of human MITF expressed in E. Coli                                                 |
| Dilution           | WB~~WB (1/500 - 1/1000) FC~~FC (1/100 - 1/200)                                                                |
| Format             | Mouse IgG1. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.                                      |
| Storage            | Store at -20 °C.Stable for 12 months from date of receipt                                                     |

## Protein Information

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name     | MITF {ECO:0000303   PubMed:8069297, ECO:0000312   HGNC:HGNC:7105}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Function | <p>Transcription factor that acts as a master regulator of melanocyte survival and differentiation as well as melanosome biogenesis (PubMed:<a href="#">10587587</a>, PubMed:<a href="#">22647378</a>, PubMed:<a href="#">27889061</a>, PubMed:<a href="#">9647758</a>). 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:<a href="#">10587587</a>, PubMed:<a href="#">22647378</a>, PubMed:<a href="#">27889061</a>, PubMed:<a href="#">9647758</a>). 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:<a href="#">36608670</a>). Upon starvation or lysosomal stress, inhibition of MTOR induces MITF dephosphorylation, resulting in transcription factor activity (PubMed:<a href="#">36608670</a>). Plays an important role in melanocyte development by regulating the expression of tyrosinase (TYR) and tyrosinase-related protein 1 (TYRP1) (PubMed:<a href="#">10587587</a>, PubMed:<a href="#">22647378</a>, PubMed:<a href="#">27889061</a>, PubMed:<a href="#">9647758</a>). 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:<a href="#">10587587</a>,</p> |

PubMed:[22647378](#), PubMed:[27889061](#), PubMed:[9647758](#)).

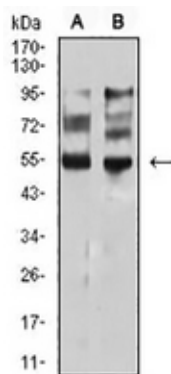
## Cellular Location

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).

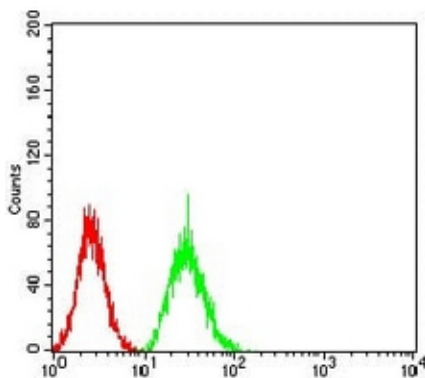
## Tissue Location

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.

## Images



Western blot analysis of MITF expression in PANC1 (A), A549 (B) whole cell lysates. (Predicted band size: 59 kDa; Observed band size: 55 kDa)



Flow cytometric analysis of HeLa cells using Anti-MITF Antibody (green) and negative control (red).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.