



MITF Rabbit mAb

Catalog No	YP-rAb-18074
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,IF,ELISA
Gene Name	MITF
Protein Name	Microphthalmia-associated transcription factor
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:200-500; WB 1:1000-5000; IF 1:200-1000; ELISA 1:5000-20000; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	MITF ; BHLHE32 ; Microphthalmia-associated transcription factor ; Class E basic helix-loop-helix protein 32 ; bHLHe32
Observed Band	58kD
Calculated Molecular Weight	58kD
Cell Pathway	Nuclear
Tissue Specificity	Expressed in melanocytes (at protein level). ; [Isoform A2]: Expressed in the retinal pigment epithelium, brain, and placenta (PubMed:9647758). Expressed in the kidney (PubMed:9647758, PubMed:10578055). ; [Isoform C2]: Expressed in the kidney and retinal pigment epithelium. ; [Isoform H1]: Expressed in the kidney. ; [Isoform H2]: Expressed in the kidney. ; [Isoform M1]: Expressed in melanocytes. ; [Isoform Mdel]: Expressed in melanocytes.
Function	Alternative products:The X2-type isoforms differ from the X1-type isoforms by the absence of a 6 residue insert,Disease:Defects in MITF are a cause of Waardenburg syndrome type 2 with ocular albinism (WS2-OA) [MIM:103470]. It is an ocular albinism with sensorineural deafness.,Disease:Defects in MITF are the cause of Tietz syndrome [MIM:103500]. It is an autosomal dominant disorder characterized by generalized hypopigmentation and profound, congenital, bilateral deafness. Penetrance is complete.,Disease:Defects in MITF are the cause of Waardenburg syndrome type 2A (WS2A) [MIM:193510]. It is a dominant





inherited disorder characterized by sensorineural hearing loss and patches of depigmentation. The features show variable expression and penetrance. Function: Transcription factor for tyrosinase and tyrosinase-related protein 1. Binds to a symmetrical DNA sequence (E-boxes) (5'-CACGTG-3') found in the tyrosinase promoter. Plays a critical role in the differentiation of various cell types as neural crest-derived melanocytes, mast cells, osteoclasts and optic cup-derived retinal pigment epithelium. PTM: Phosphorylation at Ser-405 significantly enhances the ability to bind the tyrosinase promoter. similarity: Belongs to the MiT/TFE family. similarity: Contains 1 basic helix-loop-helix (bHLH) domain. subunit: Efficient DNA binding requires dimerization with another bHLH protein. Binds DNA in the form of homodimer or heterodimer with either TFE3, TFEB or TFEC. tissue specificity: Isoform M is exclusively expressed in melanocytes and melanoma cells. Isoform A and isoform H are widely expressed in many cell types including melanocytes and retinal pigment epithelium (RPE). Isoform C is expressed in many cell types including RPE but not in melanocyte-lineage cells.

Background

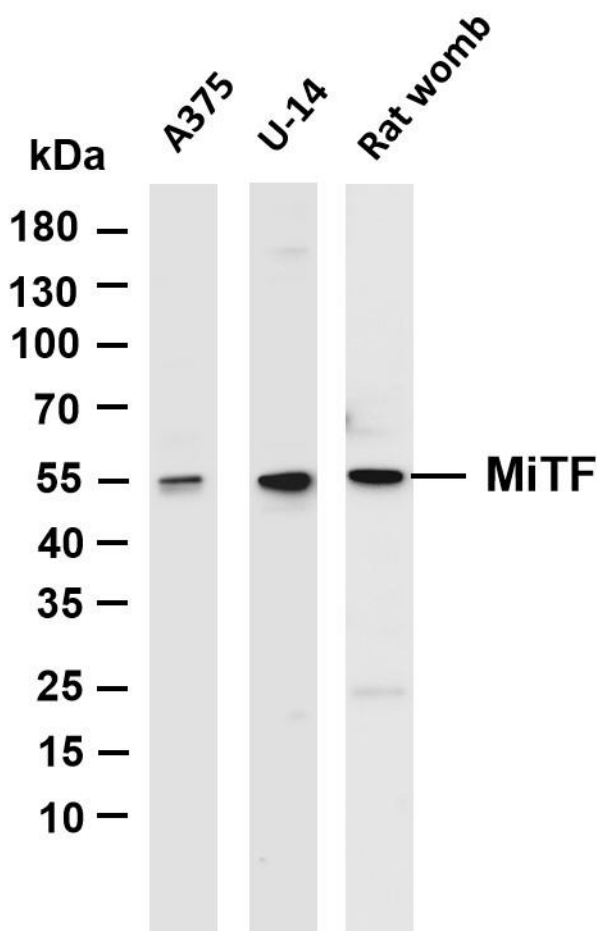
This gene encodes a transcription factor that contains both basic helix-loop-helix and leucine zipper structural features. It regulates the differentiation and development of melanocytes retinal pigment epithelium and is also responsible for pigment cell-specific transcription of the melanogenesis enzyme genes. Heterozygous mutations in the this gene cause auditory-pigmentary syndromes, such as Waardenburg syndrome type 2 and Tietz syndrome. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2008],

matters needing attention

Avoid repeated freezing and thawing!

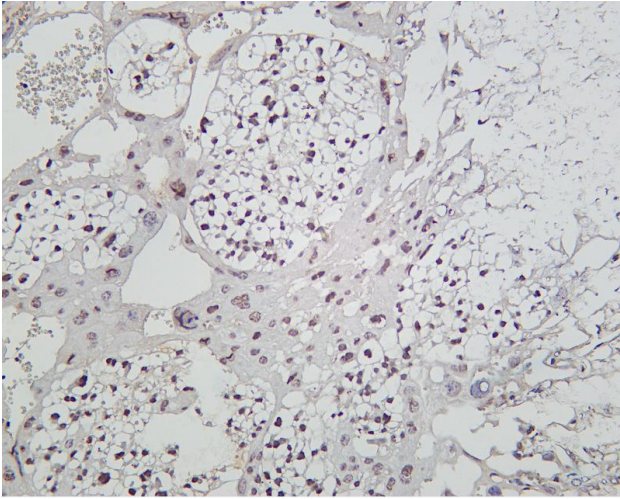
Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

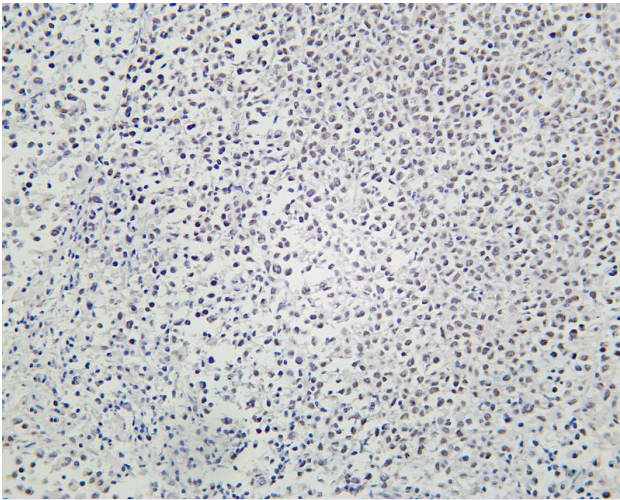


Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-MiTF antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: A375 Lane 2: U-14 Lane 3: Rat womb Predicted band size: 58kDa Observed band size: 58kDa

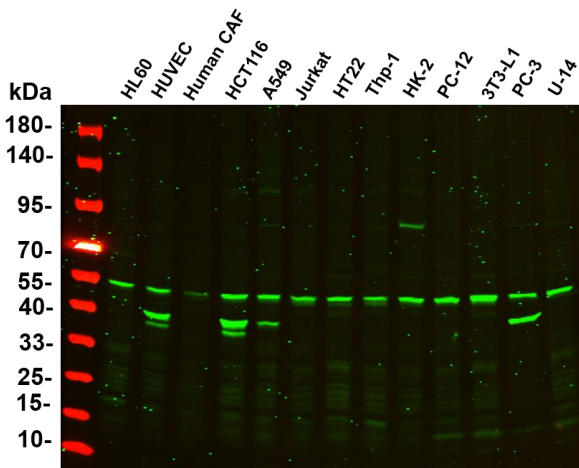




Mouse placenta was stained with Anti-MiTF rabbit antibody



Human melanoma was stained with Anti-MiTF rabbit antibody



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the primary antibody was used at 4°C, over night with a 1:2500 dilution. The Dylight 800-conjugated Goat anti-Rabbit antibody (Cat:RS23920) was used to detect the antibody. Lane1: HL60 - Human promyelocytic leukemia cell Lane2: HUVEC - Human umbilical vein endothelial cell Lane3: Human CAF - Human cancer-associated fibroblast Lane4: HCT116 - Human colorectal carcinoma Lane5: A549 - Human lung carcinoma Lane6: Jurkat - Human T lymphocyte leukemia Lane7: HT22 - Mouse hippocampal neuronal Lane8: Thp-1 - Human monocytic leukemia Lane9: HK-2 - Human proximal tubular epithelial Lane10: PC-12 - Rat adrenal pheochromocytoma Lane11: 3T3-L1 - Mouse embryonic fibroblast Lane12: PC-3 - Human prostate adenocarcinoma Lane13: U-14 - Mouse cervical carcinoma Predicted band size: 58kDa Observed band size: 58kDa

