



Rabbit Anti-MITF antibody

SL21815R

Product Name:	MITF
Chinese Name:	MITF相关转录因子抗体
Alias:	Class E basic helix-loop-helix protein 32; BHLHE32; bHLHe32; Class E basic helix-loop-helix protein 32; CMM8; Homolog of mouse microphthalmia; Mi; Microphthalmia associated transcription factor; Microphthalmia, mouse, homolog of; Microphthalmia-associated transcription factor; MITF; MITF_HUMAN; WS2; WS2A.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Pig,Cow,Rabbit,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	59kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human MITF:1-100/526
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	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].

Function:

Transcription factor for tyrosinase (TYR) and tyrosinase-related protein 1 (TYRP1) that plays a key role in melanocyte development. 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.

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. Interacts with KARS.

Subcellular Location:

Nucleus.

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.

Post-translational modifications:

Phosphorylation at Ser-405 significantly enhances the ability to bind the tyrosinase promoter. Phosphorylated at Ser-180 and Ser-516 following KIT signaling, triggering a short live activation: Phosphorylation at Ser-180 and Ser-516 by MAPK and RPS6KA1, respectively, activate the transcription factor activity but also promote ubiquitination and subsequent degradation by the proteasome.

Ubiquitinated following phosphorylation at Ser-180, leading to subsequent degradation by the proteasome. Deubiquitinated by USP13, preventing its degradation.

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.

[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 (TIETZS) [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 a cause of susceptibility to cutaneous malignant melanoma type 8 (CMM8) [MIM:614456]. A malignant neoplasm of melanocytes,

arising de novo or from a pre-existing benign nevus, which occurs most often in the skin but also may involve other sites.

Similarity:

Belongs to the MiT/TFE family.

Contains 1 basic helix-loop-helix (bHLH) domain.

SWISS:

O75030

Gene ID:

4286

Database links:

[Entrez Gene: 4286](#)Human

[Entrez Gene: 17342](#)Mouse

[Entrez Gene: 25094](#)Rat

[Oimim: 156845](#)Human

[SwissProt: O75030](#)Human

[SwissProt: Q08874](#)Mouse

[SwissProt: O88368](#)Rat

[Unigene: 166017](#)Human

[Unigene: 618266](#)Human

[Unigene: 333284](#)Mouse

[Unigene: 454504](#)Mouse

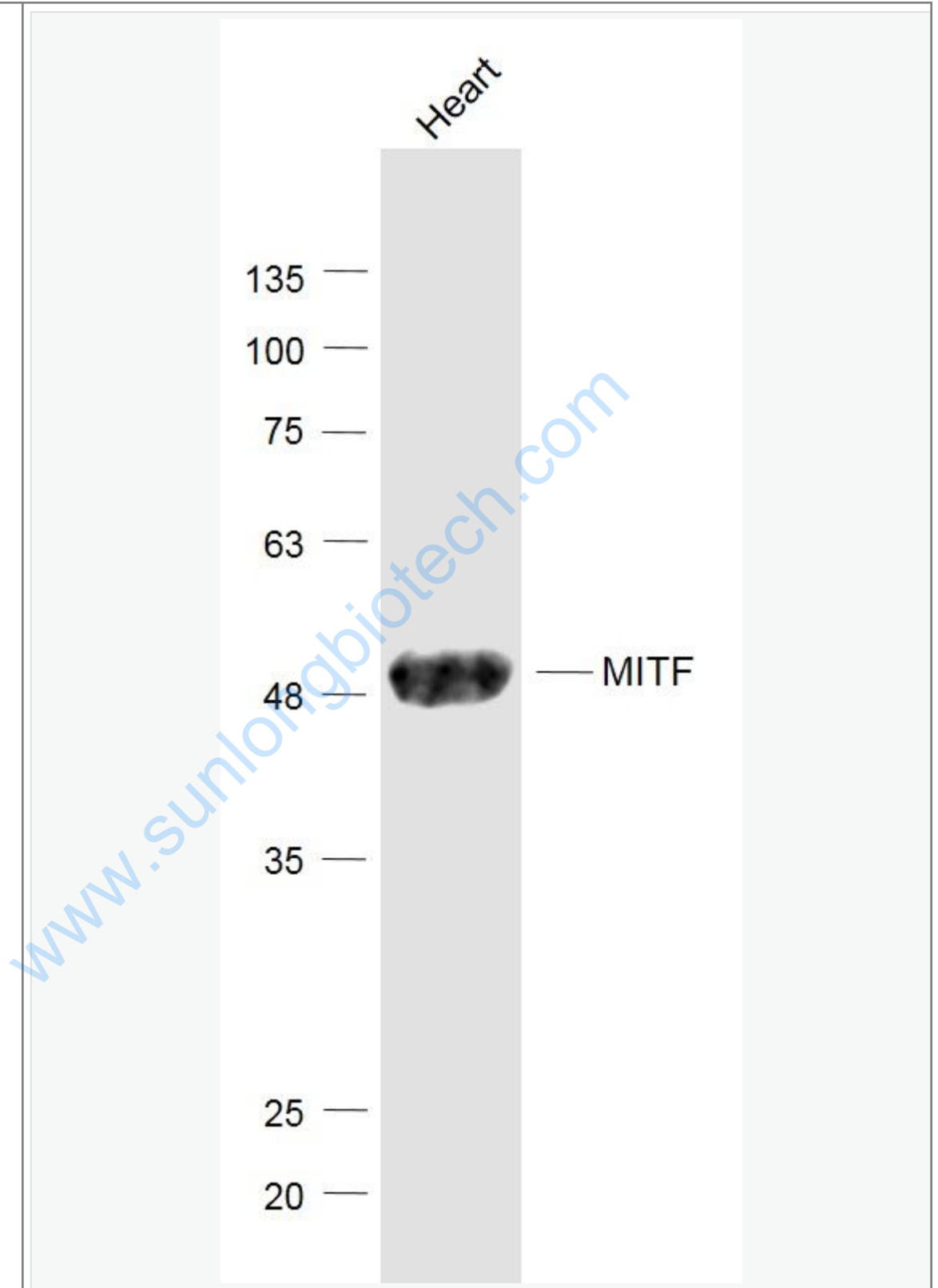
[Unigene: 31427](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

MITF微小转录因子是一个黑色素细胞的核蛋白,对黑色素细胞的生成和活性起着关键作用,MITF也是控制细胞外信号的一项调节因子。MITF高度表达于原发和转移的恶性黑色素瘤,也可视为高敏感和高特异的黑色素细胞标记。

Picture:



Sample:

Heart (Mouse) Lysate at 40 ug

Primary: Anti- MITF (SL21815R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 59 kD

Observed band size: 59 kD

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