

DESCRIPTION

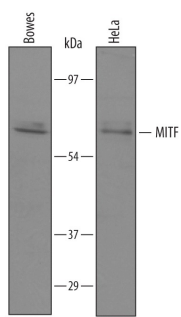
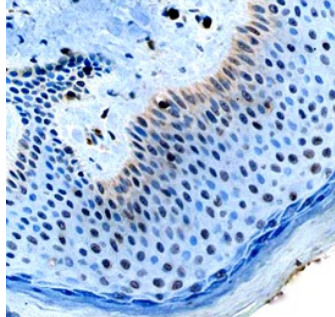
Species Reactivity	Human
Specificity	Detects human MITF in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human MITF Val119-Lys289 Accession # O75030
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Human MITF by Western Blot. Western blot shows lysates of Bowes human melanoma cell line and HeLa human cervical epithelial carcinoma cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human MITF Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5769) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for MITF at approximately 60 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.</p>	<p>Immunohistochemistry</p>  <p>MITF in Human Skin. MITF was detected in paraffin-embedded sections of human skin using Goat Anti-Human MITF Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5769) at 10 µg/mL overnight at 4 °C. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.</p>
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PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

MITF (Microphthalmia-associated transcription factor) is a member of the MiT/TFE family of molecules. Although it has a predicted MW of 58 kDa, it runs anomalously in SDS-PAGE at 57-66 kDa. MITF-A1 is found in melanocytes and RPEs where it regulates melanin synthesis via tyrosinase and TRP-1 gene expression. Human MITF-A1 is 526 amino acids (aa) in length. It contains a bHLH DNA binding region (aa 309-369) and a Leu-zipper domain (aa 374-395). There are three phosphorylation sites at Ser54/405/414, and two SUMOylation sites at Arg289/423. MITF-A1 acts as either a homodimer, or heterodimer with TFE3, TFEB or TFEC. Multiple splice variants exist, with each variant expressing one of two isoforms that are defined by the presence (#1), or absence (#2), of aa 294-299. One variant has a deletion of aa 139-194, a second has an 11 aa substitution for aa 1-118, and three others show variable substitutions over aa 1-35. Over aa 119-289, human MITF-A1 shares 96% aa identity with mouse MITF-A1.