

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                 |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human MITF in direct ELISAs and Western blots.                                |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Goat IgG                                                                   |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                             |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human MITF<br>Val119-Lys289<br>Accession # O75030 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 nm       |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                          |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                       |

## 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.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## 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.

## PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.