P.O. Box 3286 - Logan, Utah 84323, U.S.A. - Tel. (800) 729-8350 – Tel. (435) 755-9848 - Fax (435) 755-0015 - www.scytek.com

# Microphthalmia Transcription Factor (MITF); Clone D5 & MITF/915

## (Concentrate)

**Availability/Contents:**

| Item # | Volume |
|---|---|
| RA0210-C.5 | 0.5 ml |

**Description:**

| | |
|---|---|
| Species: | Mouse |
| Immunogen: | N-terminal fragment of human MITF protein (D5); Recombinant human MITF protein (MITF/915) |
| Clone: | D5 & MITF/915 |
| Isotype: | IgG1, kappa (D5); IgG1, kappa (MITF/915) |
| Entrez Gene ID: | 4286 (Human) |
| Hu Chromosome Loc.: | 3p14.1 |
| Synonyms: | BHLHE32; Class E basic helix-loop-helix protein 32 (bHLHe32); CMM8; Mi; Microphthalmia-associated transcription factor; MITF; WS2; WS2A |
| Mol. Weight of Antigen: | 52-56kDa (doublet) |
| Format: | 200µg/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. |
| Specificity: | Anti-MITF recognizes a nuclear protein, which is expressed in the majority of primary and metastatic epithelioid malignant melanomas as well as in normal melanocytes, benign nevi, and dysplastic nevi. |
| Background: | MITF (microphthalmia transcription factor) is a basic helix-loop-helix-leucine-zipper (bHLH-Zip) transcription factor that regulates the development and survival of melanocytes and retinal pigment epithelium, and is also involved in transcription of pigmentation enzyme genes such as tyrosinase TRP1 and TRP2. MITF has been shown to be phosphorylated by MAP kinase in response to c-kit activation, resulting in upregulation of MITF transcriptional activity. Mutations of the MITF gene are associated with the autosomal dominant hereditary deafness and pigmentation condition, Waardenburg Syndrome type 2A. Multiple isoforms of MITF exist, including MITF-A, MITF-B, MITF-C, MITF-H, and MITF-M, which differ in their amino-terminal domains and in their expression patterns. The MITF-M isoform is restricted to the melanocyte cell lineage. |
| Species Reactivity: | Human. Does not react with Mouse and Rat. Others not tested. |
| Positive Control: | Jurkat, A-431, HeLa or 501 Mel human melanoma cells or Melanoma. |
| Cellular Localization: | Nuclear |
| Titer/ Working Dilution: | Immunohistochemistry (Frozen and Formalin-fixed): 0.5-1 µg/ml |
| | Flow Cytometry: 0.5-1 µg/million cells |
| | Immunofluorescence: 0.5-1 µg/ml |
| | Western Blotting: 0.5-1 µg/ml |
| | Immunoprecipitation: 0.5-1 µg/500µg protein lysate |
| Microbiological State: | This product is not sterile. |

Storage: 2° C 8° C

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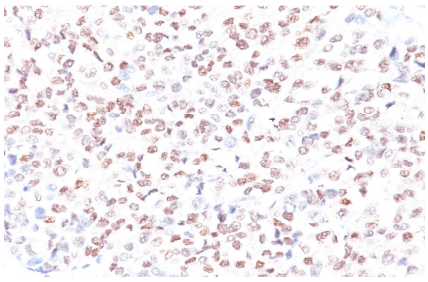
**Uses/Limitations:**

Not to be taken internally.
For Research Use Only.
This product is intended for qualitative immunohistochemistry with normal and neoplastic formalin-fixed, paraffin-embedded tissue sections, to be viewed by light microscopy.
Do not use if reagent becomes cloudy.
Do not use past expiration date.
Non-Sterile.



Formalin-fixed, paraffin-embedded human melanoma stained with MITF; Clone D5 & MITF/915.

**Ordering Information and Current Pricing at www.scytek.com**

**Procedure:**

1. **Tissue Section Pretreatment (Required):** Staining of formalin fixed, paraffin embedded tissue sections is significantly enhanced by pretreatment with Citrate Plus (ScyTek catalog# CPL500).

2. **Primary Antibody Incubation Time:** We suggest an incubation period of 30 minutes at room temperature. However, depending upon the fixation conditions and the staining system employed, optimal incubation should be determined by the user.

3. **Visualization:** For maximum staining intensity we recommend the "UltraTek HRP Anti-Polyvalent Lab Pack" (ScyTek catalog# UHP125, see IFU for instructions) combined with the "DAB Chromogen/Substrate Bulk Pack (High Contrast)" (ScyTek catalog# ACV500, see IFU for instructions).

**Precautions:**

Contains Sodium Azide as a preservative (0.09% w/v).
Do not pipette by mouth.
Avoid contact of reagents and specimens with skin and mucous membranes.
Avoid microbial contamination of reagents or increased nonspecific staining may occur.
This product contains no hazardous material at a reportable concentration according to U.S. 29 CFR 1910.1200, OSHA Hazardous Communication Standard and EC Directive 91/155/EC.

**References:**

1. Hemesath P, et. al. MAP kinase links the transcription factor microphthalmia to c-Kit signalling in melanocytes. Nature. 1998, 391:298-301.
2. Weilbaecher KN, et. al. Age-resolving osteopetrosis: a rat model implicating microphthalmia and the related transcription factor TFE3. J. Exp.Med. 1998, 187: 775-785.

**Warranty:**

No products or "Instructions For Use (IFU)" are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our IFU or website. Our warranty is limited to the actual price paid for the product. ScyTek Laboratories, Inc. is not liable for any property damage, personal injury, time or effort or economic loss caused by our products. Immunohistochemistry is a complex technique involving both histological and immunological detection methods. Tissue processing and handling prior to immunostaining can cause inconsistent results. Variations in fixation and embedding or the inherent nature of the tissue specimen may cause variations in results. Endogenous peroxidase activity or pseudoperoxidase activity in erythrocytes and endogenous biotin may cause non-specific staining depending on detection system used.

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