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

Tyrosinase; Clone T311
(Ready to Use)

Availability/Contents:

Item #	Volume
A00132-0002	2 ml
A00132-0007	7 ml
A00132-0025	25ml

Description:

Species:	Mouse
Immunogen:	A recombinant tyrosinase protein was used as the immunogen for the T311 antibody.
Clone:	T311
Isotype:	Mouse IgG1
Format:	This antibody is provided in a phosphate buffer saline containing 1% BSA.
Specificity:	Tyrosinase has been shown to be a very specific marker for melanomas. Cross reactivity with other tumors or normal tissues tested has not been reported.
Background:	Tyrosinase (Tyr) is a trans-membrane glycoprotein, plays a key role in the melano synthetic pathway and is required for the synthesis of both types of melanin, eumelanin and pheomelanin (Hu, 2011). Tyrosinase is the rate limiting enzyme catalyzing the first two steps in the melanin biosynthesis, converting tyrosine to L-dihydroxy-phenylalanine (DOPA) and subsequently to DOPAquinone. The pigmentation of skin, the browning of vegetables, wound healing and cuticle formation in insects are some of the major responsibilities performed by tyrosinase. This melanocyte-specific enzyme is localized to the post-Golgi compartment termed the melanosome. Tyrosinase consists of 533 amino acids along with 7 occupied N-glycosylation sites, 17 cysteine residues grouped in 2 cysteine-rich domains, 2 copper binding domains, and 1 C-terminal TMD. It folds in the ER and is transported to the trans-Golgi network where two copper ions are incorporated and performs different catalytic reactions such as the hydroxylation of monophenols to o-diphenols (cresolase activity) and the oxidation of o-diphenols to o-quinones (catechol oxidase activity). This process initiates the melanin synthesis. This protein is related with severe skin diseases such as type 1 albinism and melanoma and an important target for anti-melanoma vaccine therapies Anti-tyrosinase antibodies may be applied for immunotherapy in patients with malignant melanoma .
Species Reactivity:	Human.
Positive Control:	Human Melanoma.
Cellular Localization:	Cell Membrane / Membrane raft.
Titer/ Working Dilution:	No further dilution is required.
Microbiological State:	This product is not sterile.

Storage: 2° C 8° C

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CE IVD

EC REP EmergoEurope (31)(0) 70 345-8570
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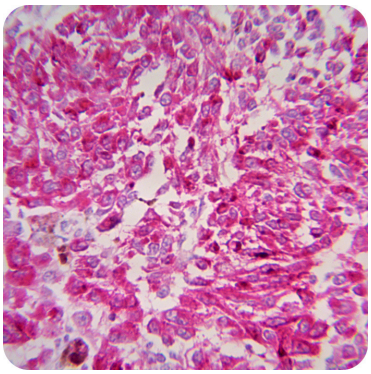
Uses/Limitations:

Not to be taken internally.
For In Vitro Diagnostic Use.
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.
Use caution when handling reagents.
Non-Sterile.

Ordering Information and Current Pricing at www.scytek.com



Human Melanoma stained using UltraTek Alk-Phos and Permanent Red Chromogen.

Procedure:

1. **Tissue Section Pretreatment (Highly Recommended):** 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:

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3. Merimsky O, Shoenfeld Y, Fishman P. The clinical significance of antityrosinase antibodies in melanoma and related hypopigmentary lesions. Clin Rev Allergy Immunol. 1998 ;16(3):227-36.
4. Francis E, Wang N, Parag H, Halaban R, Hebert DN. Tyrosinase maturation and oligomerization in the endoplasmic reticulum require a melanocyte-specific factor. J Biol Chem. 2003 ;278(28):25607-17.
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7. K B, Purohit R. Mutational analysis of TYR gene and its structural consequences in OCA1A. Gene. 2013 ;513(1):184-95.

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Storage: 2° C  8° C

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