# Tyrosinase Monoclonal Antibody (T311)

## Catalog Number MA5-14177

<table>
<thead>
<tr>
<th>Details</th>
<th>Species Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>500 µL</td>
</tr>
<tr>
<td>Host/Isotope</td>
<td>Mouse / IgG2a</td>
</tr>
<tr>
<td>Class</td>
<td>Monoclonal</td>
</tr>
<tr>
<td>Type</td>
<td>Antibody</td>
</tr>
<tr>
<td>Clone</td>
<td>T311</td>
</tr>
<tr>
<td>Immunogen</td>
<td>Recombinant tyrosinase protein</td>
</tr>
<tr>
<td>Conjugate</td>
<td>Unconjugated</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Concentration</td>
<td>0.2 mg/ml</td>
</tr>
<tr>
<td>Purification</td>
<td>Protein A</td>
</tr>
<tr>
<td>Storage Buffer</td>
<td>PBS, pH 7.4, with 0.2% BSA</td>
</tr>
<tr>
<td>Contains</td>
<td>0.09% sodium azide</td>
</tr>
<tr>
<td>Storage Conditions</td>
<td>4° C</td>
</tr>
</tbody>
</table>

### Test Results

#### Tested species reactivity
- Human

#### Published species reactivity
- Human

#### Tested Applications
- Immunocytochemistry (ICC): Assay Dependent
- Immunofluorescence (IF): Assay Dependent
- Immunohistochemistry (Paraffin) (IHC (P)): 2-4 µg/ml
- Western Blot (WB): 1-2 µg/ml

### Published Applications

<table>
<thead>
<tr>
<th>Published Applications</th>
<th>Published Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miscellaneous PubMed (MISC)</td>
<td>See 2 publications below</td>
</tr>
<tr>
<td>Immunohistochemistry (IHC)</td>
<td>See 12 publications below</td>
</tr>
<tr>
<td>ELISA (ELISA)</td>
<td>See 1 publications below</td>
</tr>
<tr>
<td>Western Blot (WB)</td>
<td>See 3 publications below</td>
</tr>
<tr>
<td>Immunocytochemistry (ICC)</td>
<td>See 3 publications below</td>
</tr>
<tr>
<td>Flow Cytometry (Flow)</td>
<td>See 1 publications below</td>
</tr>
</tbody>
</table>

* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

## Product specific information

MA5-14177 targets Tyrosinase in ICC, IF, IHC (P), and WB applications and shows reactivity with Human samples.

The MA5-14177 immunogen is recombinant tyrosinase protein.

## Background/Target Information

Tyrosinase is a copper-containing metalloprotein that catalyzes several steps in the melanin pigment biosynthetic pathway; the hydroxylation of tyrosine to L-3,4-dihydroxy-phenylalanine (dopa), and the subsequent oxidation of dopa to dopaquinone. Mutations of the tyrosinase gene occur in various forms of albinism. Tyrosinase is one of the targets for cytotoxic T-cell recognition in melanoma patients.

**Tyrosinase Antibody (MA5-14177) in IHC**

Formalin-fixed, paraffin-embedded human melanoma stained with Tyrosinase antibody using peroxidase-conjugate and AEC chromogen. Note cytoplasmic staining of tumor cells.
**PubMed References For Tyrosinase Monoclonal Antibody (T311)**

### 2 Miscellaneous PubMed References

**Species / Dilution**

**Summary**

**Human / Not Cited**

- MA5-14177 was used in flow cytometry to identify NFATc2 as a regulator of human melanoma dedifferentiation

  Oncogene (Jun 2016; 35: 2862)
  "NFATc2 is an intrinsic regulator of melanoma dedifferentiation."
  PubMed Article URL: http://dx.doi.org/10.1038/onc.2015.355

- MA5-14177 was used in immunohistochemistry (paraffin) to investigate T-cell effector function in relation to tumor-escape mechanisms.

  Clinical cancer research : an official journal of the American Association for Cancer Research (Sep 2011; 17: 5736)
  "T-cell immunosurveillance in tumor, skin, and peripheral blood of advanced stage melanoma patients: implications for immunotherapy."
  PubMed Article URL: http://dx.doi.org/10.1158/1078-0432.CCR-11-0230

### 12 Immunohistochemistry References

**Species / Dilution**

**Summary**

**Human / 1:100**

- MA5-14177 was used in immunohistochemistry to report on a case of malignant perivascular epithelioid cell tumor in a child

  Journal of pediatric surgery (Jun 2012; 47: e31)
  "Malignant perivascular epithelioid cell tumor in children: description of a case and review of the literature."
  Author(s): Alaggio R, Cecchetto G, Martignoni G, Bisogno G, Cheng L, Speri1 D, d'Amore ES, Dall'Igna P
  PubMed Article URL: http://dx.doi.org/10.1016/j.jpedsurg.2012.02.023

- MA5-14177 was used in immunohistochemistry to characterize the cancerous features of acquired melanocytic nevi following repeated exposure to UVA or UVB irradiation

  Experimental dermatology (Feb 2012; 21: 86)
  "Dermoscopic, histological and immunohistochemical evaluation of cancerous features in acquired melanocytic nevi that have been repeatedly exposed to UVA or UVB."
  Author(s): Manganoni AM, Rossi MT, Sala R, Venturini M, Serei E, Ungari M, Marocolo D, Lonardi S, Calzavara-Pinton P
  PubMed Article URL: http://dx.doi.org/10.1111/j.1600-0625.2011.01397.x

- MA5-14177 was used in immunohistochemistry to investigate the role of keratinocyte growth factor in melanogenesis and solar lentigines

  "Bilateral renal tumors; conventional clear cell carcinoma and contralateral t(6;11)(t(X;17)-like tumor Histomorphologic, immunohistochemical, ultrastructural and molecular genetic studies including the report of a novel mutation in the VHL gene."
  Author(s): Petersson F, Michal M, Vanek T, Hora M, Trivunic S, Halbhuber Z, Hes O
  PubMed Article URL: http://dx.doi.org/10.1016/j.annadiagnostpath.2010.05.004

- MA5-14177 was used in immunohistochemistry to report on a pregnant woman with bilateral renal tumors

  Experimental dermatology (Oct 2010; 21: 865)
  "The role of keratinocyte growth factor in melanogenesis: a possible mechanism for the initiation of solar lentigines.

  Author(s): Chen N, Hu Y, Li WH, Eisinger M, Selberg M, Lin CB
  PubMed Article URL: http://dx.doi.org/10.1111/j.1600-0625.2009.00957.x

- MA5-14177 was used in immunohistochemistry to report on four cases of carcinoid-like pattern in melanoma

  The American Journal of dermatopathology (Aug 2009; 31: 542)
  "Carcinoid-like pattern in melanoma: report of 4 cases."
  Author(s): Kacerovska D, Michal M, Sozna B, Cempirkova D, Ambrus M, Richter P, Danis D, Zelger B, Kazakov DV
  PubMed Article URL: http://dx.doi.org/10.1097/DAD.0b013e3181a8525a
MA5-14177 was used in immunohistochemistry to investigate the association of ET-1/SCF/receptor linkages with melanocyte function in hypopigmented palmoplantar skin

**Pigment cell and melanoma research (Dec 2008; 21: 687)**
"Downregulated melanogenic paracrine cytokine linkages in hypopigmented palmoplantar skin."
Author(s):Hasegawa J,Goto Y,Murata H,Takata M,Saida T,Imokawa G
PubMed Article URL:http://dx.doi.org/null

MA5-14177 was used in immunohistochemistry to report on two cases of a primitive small cell tumor displaying epithelial, gangliocytic, neuroendocrine and mesenchymal differentiation

"Primitive small cell tumor with epithelial, gangliocytic, neuroendocrine, and mesenchymal differentiation: report of 2 cases."
Author(s):Michal M,Kazakov DV,Sima R,Vanecek T
PubMed Article URL:http://dx.doi.org/10.11171/106896907302424

MA5-14177 was used in immunohistochemistry to study the therapeutic potential of autologous tumor cells virally transduced with GM-CSF in metastatic melanoma patients

"Immunogenicity, including vitiligo, and feasibility of vaccination with autologous GM-CSF-transduced tumor cells in metastatic melanoma patients."
PubMed Article URL:http://dx.doi.org/10.1200/JCO.2005.01.6816

MA5-14177 was used in immunohistochemistry to study the role of CD8+ T-cell immunity in disease progression of advanced-stage melanoma

**Cancer research (Jan 2005; 65: 632)**
"Immunogenicity without immunoselection: a mutant but functional antioxidant enzyme retained in a human metastatic melanoma and targeted by CD8(+) T cells with a memory phenotype."
Author(s):Sensi M,Nicolini G,Zanon M,Colombo C,Molla A,Bersani I,Lupetti R,Parmiani G,Anichini A
PubMed Article URL:http://dx.doi.org/null

MA5-14177 was used in immunohistochemistry to study the role of CD8+ T-cell immunity in disease progression of advanced-stage melanoma

**Clinical cancer research : an official journal of the American Association for Cancer Research (Jul 2004; 10: 4754)**
"On the role of melanoma-specific CD8+ T-cell immunity in disease progression of advanced-stage melanoma patients."

MA5-14177 was used in immunohistochemistry to study 5 antibodies as diagnostic markers of melanoma incytologic preparation

**American journal of clinical pathology (Dec 2002; 118: 930)**
"Comparison of five antibodies as markers in the diagnosis of melanoma in cytologic preparations."
Author(s):Sheffield MV,Yee H,Dovranta CC,Weibaecher KN,Elloum IA,Siegel GP,Fisher DE,Chhieng DC
PubMed Article URL:http://dx.doi.org/10.1158/1078-0432.CCR-02-0260

MA5-14177 was used in immunohistochemistry to study nodal micrometastases in patients with arm and trunk melanoma

**Melanoma research (Apr 2002; 12: 147)**
"Detection of nodal micrometastases using immunohistochemistry and PCR in melanoma of the arm and trunk."
Author(s):Boi S,Cristofolini P,Togni R,Girlando S,Camerani M,Donner D,Cristofolini M,Dalla Palma P
PubMed Article URL:http://dx.doi.org/null

### 1 ELISA References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>MA5-14177</strong> was used in ELISA to study IL8 and Cathepsin B in the prognosis of melanoma mortality</td>
<td></td>
</tr>
</tbody>
</table>

"IL-8 and cathepsin B as melanoma serum biomarkers."
PubMed Article URL:http://dx.doi.org/10.3390/ijms12031505

### 3 Western Blot References

**Human / Not Cited**

**Thermo Fisher Scientific**
3747 N. Meridian Road
Rockford, IL 61015 USA

thermofisher.com/contactus


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### Immunocytochemistry References

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<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>Human / Not Cited</td>
<td>MA5-14177 was used in immunocytochemistry to establish stable melanoma cell lines for personalized vaccine therapy</td>
</tr>
<tr>
<td>Human / 1:50</td>
<td>MA5-14177 was used in immunocytochemistry to study the expression and trafficking of tyrosinase in human retinal pigment epithelial cells</td>
</tr>
<tr>
<td>Human / 1:200</td>
<td>MA5-14177 was used in immunocytochemistry to establish stable melanoma cell lines for personalized vaccine therapy</td>
</tr>
<tr>
<td>Human / 1:200</td>
<td>MA5-14177 was used in immunocytochemistry to study the induction of a retinal pigment epithelial phenotype in human adipose tissue-derived mesenchymal stromal cells</td>
</tr>
<tr>
<td>Human / 1:50</td>
<td>MA5-14177 was used in immunocytochemistry to study the expression and trafficking of tyrosinase in human retinal pigment epithelial cells</td>
</tr>
<tr>
<td>Human / 1 ug/ml</td>
<td>MA5-14177 was used in immunocytochemistry to study the induction of a retinal pigment epithelial phenotype in human adipose tissue-derived mesenchymal stromal cells</td>
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</tbody>
</table>

### Flow Cytometry References

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<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human / Not Cited</td>
<td>MA5-14177 was used in flow cytometry to evaluate a novel dendritic cell vaccine strategy</td>
</tr>
<tr>
<td>Human / Not Cited</td>
<td>MA5-14177 was used in flow cytometry to evaluate a novel dendritic cell vaccine strategy</td>
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