



Anti-Dermatophyte

Mouse Monoclonal Antibody

Product Data Sheet

Cat. No.: XCMA01-1000: 1 ml
Cat. No.: XCMA01-200: 200 µl
Cat. No.: XCMA01-40: 40 µl

| | |
|-------------------------|---|
| Background: | <p>Currently, the routine fungal detection is based on the periodic acid-Schiff (PAS) stain. Principally, the PAS reaction is a frequently used staining method in histology which visualizes glycogen, cellulose, starch and mucopolysaccharides as well as other macromolecules with attached sugar groups. Periodic acid (HIO₄) is used to oxidize hydroxyl groups, e. g. on sugar molecules, to aldehyde groups. Schiff's reagent is then added which reacts with the aldehyde groups to form purplish-magenta products.</p> <p>PAS reaction is not as fungus specific as our antibody. The PAS reaction stains both fungi and granulocytes and it misses dead fungal hyphae. In contrast, our antibody allows the detection of dead fungal material in the upper skin layer as well and circumvents the need to differentiate true fungal staining from granulocyte background signals in deeper skin layers.</p> |
| Host: | Mouse |
| Isotype: | IgG1, kappa |
| Antibody concentration: | 1 mg/ml |
| Preparation: | Purified antibody in PBS, PBS with 0.09% sodium azide. |
| Storage conditions: | Upon receipt, the antibody should be kept at 2-5°C for a month, for longer periods at -20°C. For long term storage of antibody aliquots it is essential to add an equivalent volume of glycerol (99%) to the antibody stock solution; mix well and place in a freezer at -20°C. This solution which contains 50% v/v glycerol won't freeze. Repeated cycles of freezing and thawing should be avoided. |
| Specificity: | <p>The antibody can be used for the detection of the following dermatophytes:</p> <ul style="list-style-type: none"><i>Trichophyton rubrum</i><i>Trichophyton mentagrophytes</i><i>Trichophyton violaceum</i><i>Trichophyton tonsurans</i><i>Microsporum gypseum</i><i>Microsporum canis</i><i>Epidermophyton floccosum</i> |

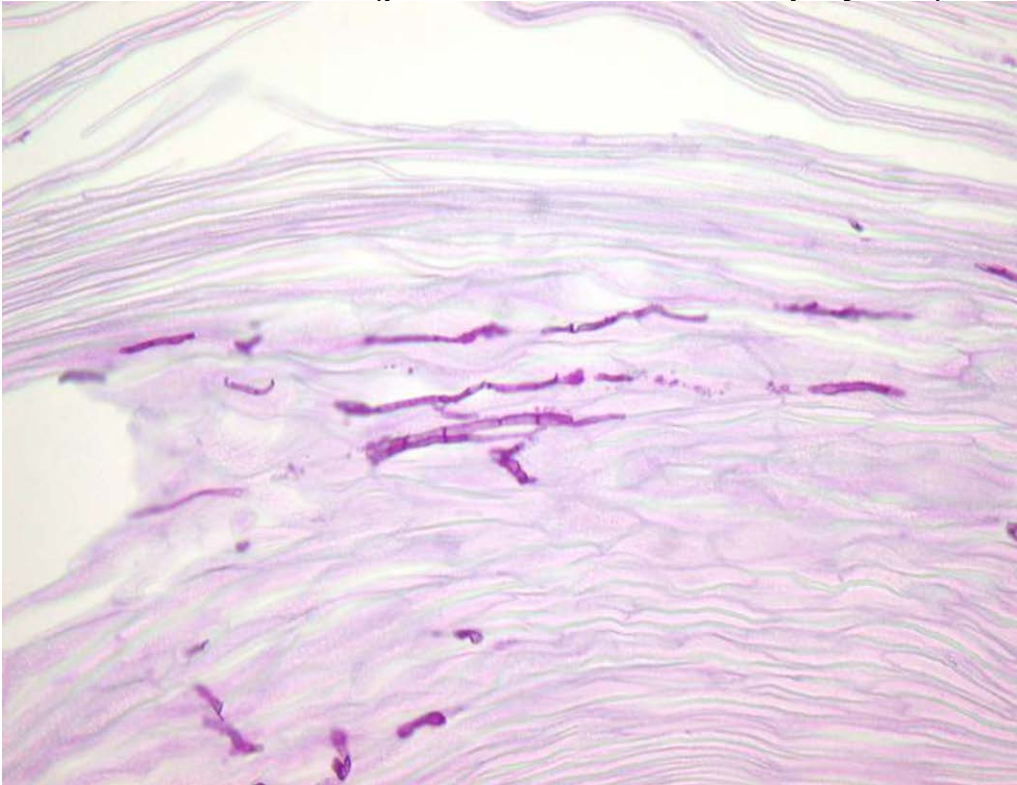
| | <p>In addition, the antibody reacts with the following fungal species that usually do not colonize human skin:</p> <p><i>Aspergillus fumigatus</i> <i>Aspergillus niger</i> <i>Aspergillus tamari</i> <i>Aspergillus oryzae</i> <i>Penicillium aurantogriseum</i> <i>Penicillium funiculosum</i> <i>Fusarium oxysporum</i></p> <p>The antibody does not react with:</p> <p><i>Sporothrix schenckii</i> <i>Fonsecaea pedrosoi</i> <i>Penicillium digitatum</i> <i>Candida albicans</i></p> <p>Our monoclonal antibody reacts with a polysaccharide (molecular weight is around 20,000) on the specific fungal cell wall and does not recognize the genus <i>Malassezia</i> which is the causative agent of the mycoses Pityriasis versicolor and Pityriasis folliculitis.</p> | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|--|-------------------------|--|-------------------------|----------------|------------|---|------------------------|------------|---|--------------------------|-----|-------|-------------------------------|-----|-------|-------|------------|---|---------------------|------------|---|------------------|------------|---|
| Applications: | <table border="0"> <thead> <tr> <th></th> <th></th> <th style="text-align: right;"><u>Working Dilution</u></th> </tr> </thead> <tbody> <tr> <td>Flow Cytometry</td> <td>not tested</td> <td style="text-align: right;">-</td> </tr> <tr> <td>Immunohistology-frozen</td> <td>not tested</td> <td style="text-align: right;">-</td> </tr> <tr> <td>Immunohistology-paraffin</td> <td>Yes</td> <td style="text-align: right;">1:100</td> </tr> <tr> <td>Immunohistology-Ethanol fixed</td> <td>Yes</td> <td style="text-align: right;">1:100</td> </tr> <tr> <td>ELISA</td> <td>not tested</td> <td style="text-align: right;">-</td> </tr> <tr> <td>Immunoprecipitation</td> <td>not tested</td> <td style="text-align: right;">-</td> </tr> <tr> <td>Western Blotting</td> <td>not tested</td> <td style="text-align: right;">-</td> </tr> </tbody> </table> <p>Treatment with pronase is not necessary. Antigen retrieval at pH 6.1.</p> <p>Important: Do not use aqueous solutions for pretreatment (for tissue or nail softening) of specimens such as KOH or other hydroxide solutions since the antigen will be easily washed out. We recommend to use Soft Nail (Polysciences, Inc., cat. no. 24775) instead.</p> | | | <u>Working Dilution</u> | Flow Cytometry | not tested | - | Immunohistology-frozen | not tested | - | Immunohistology-paraffin | Yes | 1:100 | Immunohistology-Ethanol fixed | Yes | 1:100 | ELISA | not tested | - | Immunoprecipitation | not tested | - | Western Blotting | not tested | - |
| | | <u>Working Dilution</u> | | | | | | | | | | | | | | | | | | | | | | | |
| Flow Cytometry | not tested | - | | | | | | | | | | | | | | | | | | | | | | | |
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| Western Blotting | not tested | - | | | | | | | | | | | | | | | | | | | | | | | |
| Usage: | <p>This product is furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.</p> | | | | | | | | | | | | | | | | | | | | | | | | |
| References: | <p>Kanitakis J, Karayannopoulou G. Applicability of an Anti-Trichophyton Monoclonal Antibody for the Immunohistochemical Diagnosis of Human Fungal Skin Infections (Dermatophytosis) in Tissue Sections. American Journal of Dermatopathology, 2015 Jan 14. [Epub ahead of print].</p> <p>Lanternier F, Pathan S, Vincent QB, Liu L, Cypowjy S, Prando C, Migaud M, Taibi L, Ammar-Khodja A, Boudghene Stambouli O, Guellil B, Jacobs F, Goffard JC, Schepers K, del Marmol V, Boussofara L, Denguezli M, Larif M, Bachelez H, Michel L, Lefranc G, Hay R, Jouvion G, Chretien F, Freitag S, Bougnoux ME, Boudia M, Abel L, Lortholary O, Casanova JL, Picard C, Grimbacher B, Puel A. Deep dermatophytosis and inherited CARD9 deficiency. New England Journal of Medicine, 2013 Oct 31;369(18):1704-14.</p> <p>Nenoff P, Krüger C, Schaller J, Ginter-Hanselmayer G, Schulte-Beerbühl R, Tietz HJ. Mycology - an update part 2: dermatomycoses: clinical picture and diagnostics. Journal der Deutschen Dermatologischen Gesellschaft, 2014 Sep;12(9):749-77.</p> | | | | | | | | | | | | | | | | | | | | | | | | |

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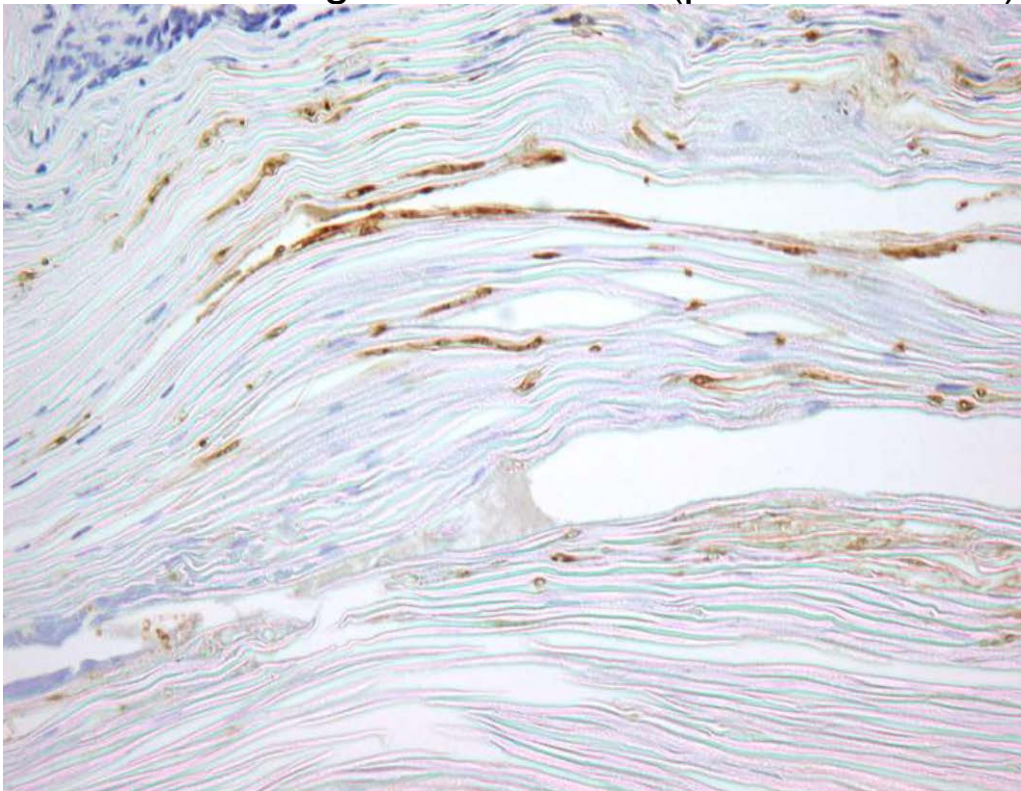
XCMA01 - 010716

Trichophyton

PAS reaction (positive with *Trichophyton*)



Immunostaining with XCMA01 (positive control)

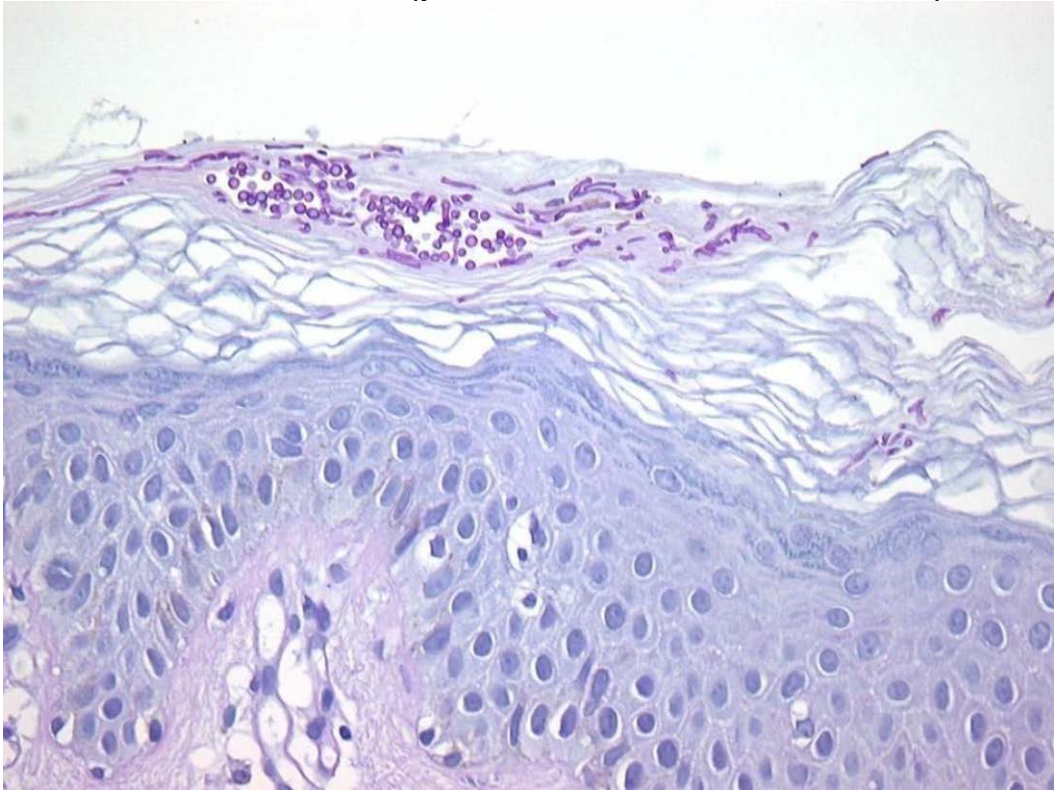


XCMA01 does stain *Trichophyton*

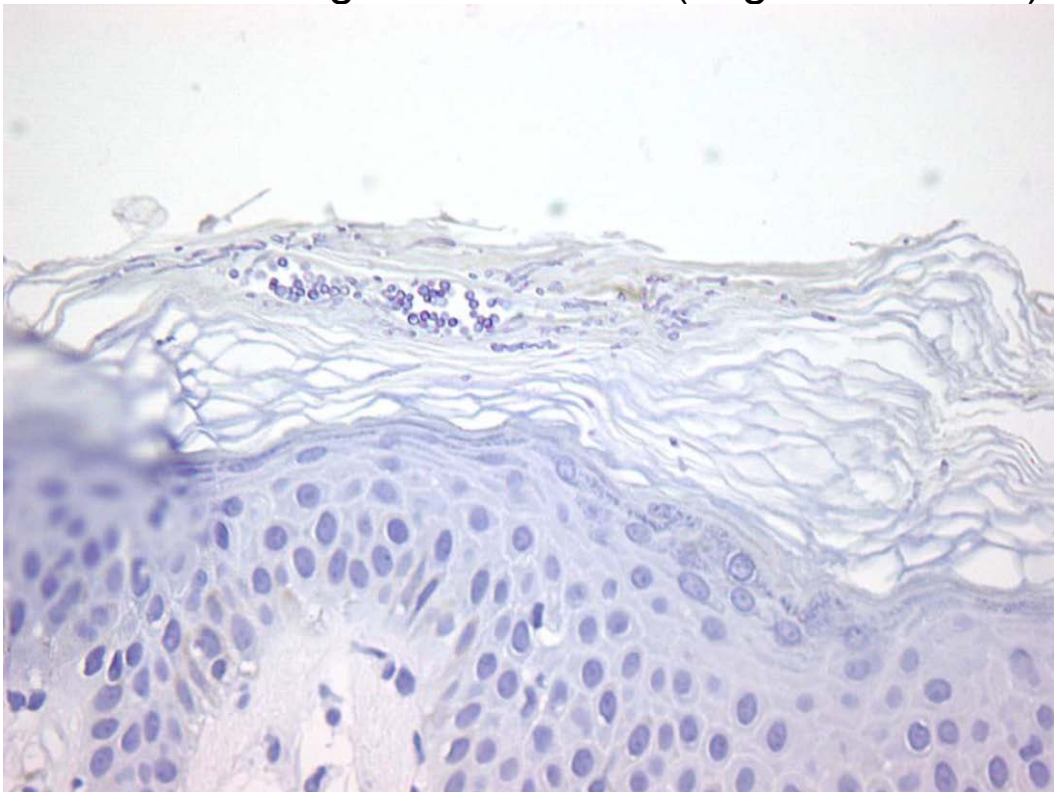
XCMA01 - 010716

Malassezia

PAS reaction (positive with *Malassezia*)



Immunostaining with XCMA01 (negative control)



XCMA01 does not stain *Malassezia*

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