Involucrin Monoclonal Antibody (SY5), Biotin

**Catalog Number:** MA5-11800

### Details

<table>
<thead>
<tr>
<th><strong>Size</strong></th>
<th>500 µL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Host/Isotope</strong></td>
<td>Mouse / IgG1</td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td>Monoclonal</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>Antibody</td>
</tr>
<tr>
<td><strong>Clone</strong></td>
<td>SY5</td>
</tr>
<tr>
<td><strong>Immunogen</strong></td>
<td>Human keratinocytes' involucrin</td>
</tr>
<tr>
<td><strong>Conjugate</strong></td>
<td>Biotin</td>
</tr>
<tr>
<td><strong>Form</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Concentration</strong></td>
<td>0.2 mg/ml</td>
</tr>
<tr>
<td><strong>Purification</strong></td>
<td>Protein G</td>
</tr>
<tr>
<td><strong>Storage buffer</strong></td>
<td>PBS, pH 7.4, with 0.2% BSA</td>
</tr>
<tr>
<td><strong>Contains</strong></td>
<td>0.09% sodium azide</td>
</tr>
<tr>
<td><strong>Storage Conditions</strong></td>
<td>4° C</td>
</tr>
</tbody>
</table>

### Species Reactivity

- **Tested species reactivity:** Dog, Human, Non-human primate, Pig, Rat
- **Published species reactivity:** Rat, Sheep, Human, Mouse

### Tested Applications

- **ELISA (ELISA):** Assay Dependent
- **Immunofluorescence (IF):** Assay Dependent
- **Immunohistochemistry (Paraffin) (IHC (P)):** 1:100-200
- **Immunoprecipitation (IP):** 2 µg/ml
- **Western Blot (WB):** 1-2 µg/ml

### Published Applications

- **Immunohistochemistry (IHC):** See 16 publications below
- **Western Blot (WB):** See 9 publications below
- **Immunocytochemistry (ICC):** See 7 publications below
- **Flow Cytometry (Flow):** See 1 publications below

* 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

MA5-11800 targets Involucrin in ELISA, IF, IHC (P), IP, and WB applications and shows reactivity with Canine, Human, Non-human primate, Porcine, and Rat samples.

The MA5-11800 immunogen is human keratinocytes' involucrin.

### Background/Target Information

Involucrin is expressed in a range of stratified squamous epithelia, including the cornea. In normal epidermis, it is first expressed in the upper spinous layers, and in keratinocyte cultures it is expressed by all cells that have left the basal layer. Involucrin expression is abnormal in squamous cell carcinomas and premalignant lesions, and is reduced in severe dysplasias of the larynx and cervix.

Involucrin Antibody (MA5-11800) in WB
Western blot of Involucrin using Involucrin Monoclonal Antibody (Product # MA5-11800) on LS174T Cells.

Involucrin Antibody (MA5-11800) in IHC
Formalin-fixed, paraffin-embedded human skin stained with Involucrin antibody using peroxidase-conjugate and DAB chromogen. Note cytoplasmic staining in the epidermal region.
## 16 Immunohistochemistry References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Human / Not Cited</strong></td>
<td>MA5-11800 was used in immunohistochemistry to study the use of a defined medium containing insulin, transferrin and selenium as an alternative to fetal calf serum for the culture of epidermal equivalents.</td>
</tr>
<tr>
<td><strong>Human / 1:100</strong></td>
<td>Pediatric surgery international (Mar 2013; 29; 249) &quot;Optimizing in vitro culture conditions leads to a significantly shorter production time of human dermo-epidermal skin substitutes.&quot; Author(s): Pontiggia L,Klar A,Böttcher-Haberzeth S,Biedermann T,Meuli M,Reichmann E PubMed Article URL: <a href="http://dx.doi.org/10.1007/s00383-013-3268-x">http://dx.doi.org/10.1007/s00383-013-3268-x</a></td>
</tr>
<tr>
<td><strong>Human / 1:500</strong></td>
<td>MA5-11800 was used in immunohistochemistry to develop a culture system for the rapid generation of high quality human autologous dermo-epidermal skin substitutes.</td>
</tr>
<tr>
<td><strong>Human / 200 mg/ml</strong></td>
<td>MA5-11800 was used in immunohistochemistry to investigate the influence of zidovudine on gingival epithelium growth</td>
</tr>
<tr>
<td><strong>Human / Not Cited</strong></td>
<td>MA5-11800 was used in immunohistochemistry to study the expression pattern of stem cells in the bulbar conjunctival epithelium.</td>
</tr>
<tr>
<td><strong>Human / Not Cited</strong></td>
<td>MA5-11800 was used in immunohistochemistry to characterize two clinical cases of saurian papulosis.</td>
</tr>
<tr>
<td><strong>Human / Not Cited</strong></td>
<td>MA5-11800 was used in immunohistochemistry and western blot to study the role of CD44 in tight-junction assembly and barrier function.</td>
</tr>
<tr>
<td><strong>Human / Not Cited</strong></td>
<td>MA5-11800 was used in immunohistochemistry to develop a culture system for the rapid generation of high quality human autologous dermo-epidermal skin substitutes.</td>
</tr>
<tr>
<td><strong>Human / Not Cited</strong></td>
<td>Tissue engineering. Part A (Jan 2010; 16: 213) &quot;Human embryonic stem cell-derived keratinocytes exhibit an epidermal transcription program and undergo epithelial morphogenesis in engineered tissue constructs.&quot; Author(s): Metallo CM,Azarim SM,Moses LE,ji,L de Pablo JJ,Palecek SP PubMed Article URL: <a href="http://dx.doi.org/10.1089/ten.TEA.2009.0325">http://dx.doi.org/10.1089/ten.TEA.2009.0325</a></td>
</tr>
</tbody>
</table>
MA5-11800 was used in immunohistochemistry to identify the markers of epidermal differentiation in skin substitutes

Human / 1:100

"Transglutaminases, involucrin, and loricin as markers of epidermal differentiation in skin substitutes derived from human sweat gland cells."
Author(s): Tharakan S, Pontiggia L, Biedermann T, Böttcher-Haberzeth S, Schiestl C, Reichmann E, Meuli M
PubMed Article URL: http://dx.doi.org/10.1007/s00383-009-2517-5

Human / Not Cited

MA5-11800 was used in immunohistochemistry to investigate the efficiency of dermal gene transfer with different psuedotyped HIV-based vectors

Human / 1:100

"Gene transfer in human skin with different psuedotyped HIV-based vectors."
PubMed Article URL: http://dx.doi.org/10.1038/sj.gt.3302915

Human / 1:100

MA5-11800 was used in immunohistochemistry to study the terminal differentiation of umbilical cord epithelial cells

Human / 1:100

"Engraftment of umbilical cord epithelial cells in athymic mice: in an attempt to improve reconstructed skin equivalents used as epithelial composite."
Author(s): Sanmango B, Mizoguchi M, Suga Y, Ikeda S, Ogawa H
PubMed Article URL: http://dx.doi.org/10.1016/j.jdermsci.2004.10.008

Human / 1:40

"Characterization of putative stem cell phenotype in human limbal epithelia."
Author(s): Chen Z, de Paiva CS, Luo L, Kretzer FL, Pflugfelder SC, Li DQ
PubMed Article URL: http://dx.doi.org/10.1634/sterncells.22-3-355

Human / Not Cited

MA5-11800 was used in immunohistochemistry to study human X-linked severe combined immunodeficiency and thymic dendritic and epithelial cell development

Human / Not Cited

"Abnormal development of thymic dendritic and epithelial cells in human X-linked severe combined immunodeficiency."
Author(s): Hale LP, Buckley RH, Puck JM, Patel DD

Human / Not Cited

MA5-11800 was used in immunohistochemistry to study the regulation of epithelial cell differentiation and human thymic medulla Hassall body formation by corticosteroids

Human / Not Cited

"Corticosteroids regulate epithelial cell differentiation and Hassall body formation in the human thymus."
Author(s): Hale LP, Markert ML

Human / Not Cited

MA5-11800 was used in immunohistochemistry to develop an organotypic keratinocyte coculture system with potential for use in autologous skin grafting

Human / Not Cited

"Organotypic keratinocyte coculture using normal human serum: an immunomorphological study at light and electron microscopic levels."
Author(s): Hinterhuber G, Marquardt Y, Diem E, Rappersberger K, Wolff K, Foedingder D

Human / Not Cited

MA5-11800 was used in immunohistochemistry to study the role of Toll-like receptor-2 in the activation of human gingival epithelial cells by bacterial fimbrae

Human / Not Cited

"Bacterial fimbrae and their peptides activate human gingival epithelial cells through Toll-like receptor 2."
Author(s): Asai Y, Ohyama Y, Gen K, Ogawa T

9 Western Blot References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9 Western Blot References</strong></td>
<td></td>
</tr>
</tbody>
</table>


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MA5-11800 was used in western blot to discuss how changes in calcium levels control differentiation of HaCaT.

Human / Not Cited

Methods in molecular biology (Clifton, N.J.) (Jul 2014; 1195: 33)
"Growth and differentiation of HaCaT keratinocytes."
Author(s):Wilson VG
PubMed Article URL:http://dx.doi.org/10.1007/7651_2013_42

Human / Not Cited

MA5-11800 was used in western blot to study the mechanism by which Id-1 induces cell invasiveness in immortalized epithelial cells

Human / Not Cited

Journal of cellular biochemistry (Jan 2011; 112: 157)
"Id-1 induces cell invasiveness in immortalized epithelial cells by regulating cadherin switching and Rho GTPases."
Author(s):Cheung PY,Yip YL,Tsao SW,Ching YP,Cheung AL
PubMed Article URL:http://dx.doi.org/10.1002/jcb.22911

Human / 1:100

MA5-11800 was used in western blot to evaluate biomaterials suitable for promoting and altering Notch signaling pathway

Human / Not Cited

"Methods to promote Notch signaling at the biomaterial interface and evaluation in a rafted organ culture model."
Author(s):Beckstead BL,Tung JC,Liang KJ,Tavakkol Z,Usui ML,Olerud JE,Giachelli CM
PubMed Article URL:http://dx.doi.org/10.1002/jbm.a.32214

Human / Not Cited

MA5-11800 was used in western blot to study the effect of exposure to ionizing radiation on gene expression in human skin keratinocytes and fibroblasts

Human / 1:100

"Mimicking cell-cell interactions at the biomaterial-cell interface for control of stem cell differentiation."
Author(s):Beckstead BL,Santosa DM,Giachelli CM
PubMed Article URL:http://dx.doi.org/10.1002/jbm.a.30760

Human / Not Cited

Radiation research (Jul 2009; 172: 82)
"Differential gene expression in primary human skin keratinocytes and fibroblasts in response to ionizing radiation."
Author(s):Warters RL,Backard AT,Harper GF,Galfney DK,Moos PJ
PubMed Article URL:http://dx.doi.org/10.1667/RR1677.1

Human / 1:100

MA5-11800 was used in western blot to study the long-term maintenance of human keratinocytes in vitro

Human / Not Cited

The Journal of investigative dermatology (Feb 2005; 124: 475)
"Long-term maintenance of human keratinocytes in vitro."
Author(s):Hasnaski J,Velupillai P,Piboonyiyom SO,Grace M,Münger K

Human / Not Cited

MA5-11800 was used in western blot to study Akt and MAP kinase-induced survival of malignant versus normal prostate epithelial cells

Human / Not Cited

Cancer research (Sep 2004; 64: 6190)
"Enhanced redundancy in Akt and mitogen-activated protein kinase-induced survival of malignant versus normal prostate epithelial cells."
Author(s):Uzgare AR,Isaacs JT
PubMed Article URL:http://dx.doi.org/10.1158/0008-5472.CAN-04-0968

Human / 1:1000

Journal of cellular physiology (Sep 2003; 196: 532)
"Rap1, a small GTP-binding protein is upregulated during arrest of proliferation in human keratinocytes."
PubMed Article URL:http://dx.doi.org/10.1002/jcp.10331

Human / Not Cited

MA5-11800 was used in western blot to study the role of the small GTP-binding protein Rap1 in human keratinocyte proliferation

Human / 1:1000

Journal of cellular physiology (Sep 2003; 196: 532)
"Rap1, a small GTP-binding protein is upregulated during arrest of proliferation in human keratinocytes."
PubMed Article URL:http://dx.doi.org/10.1002/jcp.10331

Human / Not Cited

MA5-11800 was used in western blot to study the involvement of E-cadherin in keratinocyte cell-cell adhesion

Human / Not Cited

Molecular biology of the cell (Jul 2001; 12: 1983)
"Microtubule disruption in keratinocytes induces cell-cell adhesion through activation of endogenous E-cadherin."
Author(s):Kee SH,Steinert PM
PubMed Article URL:http://dx.doi.org/null

7 Immunocytochemistry References

Species / Dilution

Summary


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MA5-11800 was used in immunocytochemistry to evaluate the application of cryogenic electrosprun silk scaffold in an in vitro mucosal model


MA5-11800 was used in immunocytochemistry to investigate the ability of thymic epithelial cells to form skin


MA5-11800 was used in immunocytochemistry to investigate the ability of calprotectin in human gingival keratinocyte differentiation


MA5-11800 was used in immunocytochemistry to investigate the possibility of ligand-bearing modified Ad5 vectors to transducing human corneal epithelial progenitor cells

Experimental eye research (Oct 2006; 83: 798) "Improved transduction of human corneal epithelial progenitor cells with cell-targeting adenoviral vectors." Author(s): Chen Z, Mok H, Pfugfelder SC, Li DQ, Barry MA PubMed Article URL: http://dx.doi.org/10.1016/j.exer.2006.03.023

MA5-11800 was used in immunocytochemistry to evaluate gap junction protein connexin 43 as a negative marker of the pluripotency of human limbal epithelial cells