CD34 Monoclonal Antibody (QBEnd-10)

<table>
<thead>
<tr>
<th>Details</th>
<th>Species Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size 100 ug</td>
<td>Tested species reactivity Human, Non-human primate</td>
</tr>
<tr>
<td>Host/Isotope Mouse / IgG1</td>
<td>Published species reactivity Rabbit, Rat, Bovine, Human, Mouse, Not Applicable</td>
</tr>
<tr>
<td>Class Monoclonal</td>
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<tr>
<td>Type Antibody</td>
<td></td>
</tr>
<tr>
<td>Clone QBEnd-10</td>
<td></td>
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<tr>
<td>Immunogen Human endothelial vesicles</td>
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<tr>
<td>Conjugate Unconjugated</td>
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<tr>
<td>Form Liquid</td>
<td></td>
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<tr>
<td>Concentration 1 mg/ml</td>
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<tr>
<td>Purification Protein A</td>
<td></td>
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<tr>
<td>Storage buffer PBS, pH 7.4</td>
<td></td>
</tr>
<tr>
<td>Contains no preservative</td>
<td></td>
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<tr>
<td>Storage Conditions 4° C, do not freeze</td>
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<tr>
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<td>Miscellaneous PubMed (MISC)</td>
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**Product specific information**

This antibody will not cross-react with rat, bovine, canine or sheep.

**Background/Target Information**

CD34 is a highly glycosylated monomeric 111-115 kDa surface protein, which is present on many stem cell populations. It is a well established stem cell marker, though its expression on human hematopoietic stem cells is reversible. CD34 probably serves as a surface receptor that undergoes receptor-mediated endocytosis and regulates adhesion, differentiation and proliferation of hematopoietic stem cells and other progenitors. CD34 expression is likely to represent a specific state of hematopoietic development that may have altered adhering properties with expanding and differentiating capabilities in both in vitro and in vivo conditions.


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Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts (“Documentation”). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, it is the User’s sole responsibility to select, test, use and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

There is no warranty that the use of the Products will result in a successful outcome, and the User is responsible for proper selection and testing of the Products. The User is responsible for proper selection, testing and use of the Products in accordance with the Documentation. The User must consult with its own medical and technical advisors as to the suitability of the Products for the User’s intended uses.

Product data sheet

CD34 Monoclonal Antibody (QBEnd-10)

Catalog Number MA1-10202

- Size: 100 ug
- Host/Isotope: Mouse / IgG1
- Class: Monoclonal
- Type: Antibody
- Clone: QBEnd-10
- Immunogen: Human endothelial vesicles
- Conjugate: Unconjugated
- Form: Liquid
- Concentration: 1 mg/ml
- Purification: Protein A
- Storage buffer: PBS, pH 7.4
- Contains: no preservative
- Storage Conditions: 4° C, do not freeze

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PubMed References For CD34 Monoclonal Antibody (QBEnd-10)

144 Immunohistochemistry References

Species / Dilution | Summary
--- | ---
Not Applicable / 1:100 | MA1-10202 was used in immunohistochemistry to find a prognostic indicator for patients with HCC after surgical resection by profiling CK19 and glypican 3 expression

PloS one (Mar 2016; 11: null)
"CK19 and Glypican 3 Expression Profiling in the Prognostic Indication for Patients with HCC after Surgical Resection."
PubMed Article URL:http://dx.doi.org/10.1371/journal.pone.0151501

Rat / Not Cited | MA1-10202 was used in immunohistochemistry to study the effect of alpha-lipoic acid in optimizing mesh integration in subcutaneous tissue.

International journal of experimental pathology (Jun 2015; 96: 172)
"Effect of alpha lipoic acid co-administration on structural and immunohistochemical changes in subcutaneous tissue of anterior abdominal wall of adult male albino rat in response to polypropylene mesh implantation."
Author(s):Mazrooa SA,Akser SA,Akser W,Abd Ellatif M
PubMed Article URL:http://dx.doi.org/10.1111/iep.12127

Human / 1:800 | MA1-10202 was used in immunohistochemistry to report on two cases of superficial soft tissue biphasic synovial sarcoma presenting with apocrine differentiation.

The American Journal of dermatopathology (Oct 2014; 36: 847)
"Superficial soft tissue biphasic synovial sarcoma with apocrine differentiation in the glandular component: a report of two cases."
Author(s):Shelekhova KV,Calonje E,Grossmann P,Kacerovska D,Koudela K,Mirka H,Michal M,Kazakov DV
PubMed Article URL:http://dx.doi.org/10.1097/DAD.0b013e318287d49f

Human / 1:100 | MA1-10202 was used in immunohistochemistry to study the mechanisms underlying the beneficial effects of using platelet-rich plasma in composite chondrocutaneous graft procedures

"Use of platelet-rich plasma solution applied with composite chondrocutaneous graft technique: an experimental study in rabbit model."
Author(s):Sevim KZ,Yazar M,Irmak F,Tekke in MS,Yildiz K,Sirvan SS
PubMed Article URL:http://dx.doi.org/10.1016/j.joms.2014.01.001

Human / 1:200 | MA1-10202 was used in immunohistochemistry to study the recruitment to tumor-associated reactive stroma of a novel CD34 (+)/vimentin(+) dual-positive fibroblast

The American Journal of pathology (Jun 2014; 184: 1860)
"Recruitment of CD34(+) fibroblasts in tumor-associated reactive stroma: the reactive microvasculature hypothesis."
Author(s):San Martin R,Barron DA,Tuxhorn JA,Ressler SJ,Rowley DR
PubMed Article URL:http://dx.doi.org/10.1016/j.amjpath.2014.02.021

Human / 1:4000 | MA1-10202 was used in immunohistochemistry to screen a panel of 33 proteins to establish a set of biomarkers that predict the aggressiveness of prostate cancer

"Evaluation of protein biomarkers of prostate cancer aggressiveness."
Author(s):Zizzardi AE,Rosener NK,Koopeimins JS,Iasaksson Vogel R,Metzger GJ,Forster CL,Marston LO,Tiffany JR,
McCarty JB,Turney EA,Warlock CA,Henrikse J,C,Smechel SC
PubMed Article URL:http://dx.doi.org/10.1186/1471-2407-14-244
MA1-10202 was used in immunohistochemistry to study the association of mutations in PDGF-Ralpha with gastrointestinal stromal tumors of rhabdoid morphology

Human / 1:400

Histopathology (Feb 2014; 64: 421)
"Rhabdoid morphology in gastrointestinal stromal tumours (GISTs) is associated with PDGFRA mutations but does not imply aggressive behaviour."
Author(s): Schaefer IM, Ströbel P, Cameron S, Beham A, Otto C, Schildhaus HU, Agaimy A
PubMed Article URL:http://dx.doi.org/10.1111/his.12265

MA1-10202 was used in immunohistochemistry to report on a case of hepatosplenic T-cell lymphoma with leukemic transformation

Human / 1:200

Romanian journal of morphology and embryology = Revue roumaine de morphologie et embryologie (Jan 2014; 54: 1135)
"Histopathological, immunophenotypic and clinical particularities and evolution of a case of hepatosplenic T-cell lymphoma in transformation to leukemia."
Author(s): Benedek Lázár E, Köpeczi JB, Tunyogi AB, Kakucus E, Horváth E, Turcu M, Benedek I
PubMed Article URL:http://dx.doi.org/null

MA1-10202 was used in immunohistochemistry to study the clinicopathology of gastrointestinal stromal tumors with novel KIT mutations

Human / 1:200

Applied immunohistochemistry and molecular morphology : AIMM (Jan 2014; 22: 37)
"Molecular analysis of the KIT gene in gastrointestinal stromal tumors with novel mutations."
PubMed Article URL:http://dx.doi.org/10.1097/PAI.0b013e31828a074

MA1-10202 was used in immunohistochemistry to study the prognostic value of the immunohistochemical expression of MGMT in low-grade ganglioglioma

Human / 1:400

Folia neuropathologica (Dec 2013; 51: 275)
"The prognostic impact of MGMT expression on low-grade gangliogliomas: a clinicopathological and immunohistochemical study."
Author(s): Chang I.W, Hsu C.T, Lin J.W, Hung C.H
PubMed Article URL:http://dx.doi.org/null

MA1-10202 was used in immunohistochemistry to study the diagnostic value of the immunohistochemical expression of DOG1 in gastrointestinal stromal tumors

Human / 1:50

Pathology, research and practice (Jul 2013; 209: 413)
"Contribution of DOG1 expression to the diagnosis of gastrointestinal stromal tumors."
Author(s): Kara T, Serinsoz E, Arpacı RB, Gubur O, Orekici G, Ata A, Colak T, Arican A
PubMed Article URL:http://dx.doi.org/10.1016/j.prp.2013.04.005

MA1-10202 was used in immunohistochemistry to study the bone metastasis of primary breast cancer stem-like cells and the bone-tropism signature displayed by cells isolated from bone

Human / Not Cited

British journal of cancer (Jun 2013; 108: 2525)
"Primary breast cancer stem-like cells metastasise to bone, switch phenotype and acquire a bone tropism signature."
PubMed Article URL:http://dx.doi.org/10.1038/bjc.2013.271

MA1-10202 was used in immunohistochemistry to report on a case of primitive myxoid mesenchymal tumor of infancy

Human / Not Cited

Medical molecular morphology (Jun 2013; 46: 109)
"A rare malignant tumor of scalp in a 3-month-old Taiwanese infancy: case report of primitive myxoid mesenchymal tumor of infancy with molecular study."
Author(s): Su T.C, Hwang M.J., Li CJ, Wang SC, Lee CH, Chen CJ
PubMed Article URL:http://dx.doi.org/10.1007/s00795-013-0032-1

MA1-10202 was used in immunohistochemistry to characterize transgenic mice with bilateral adrenal tumors

Human / Not Cited

Cancer medicine (Jun 2013; 2: 286)
"Combination therapy with gefitinib and doxorubicin inhibits tumor growth in transgenic mice with adrenal neuroblastoma."
Author(s): Kawano K, Hatton Y, Iwakura H, Akamizu T, Maitani Y
PubMed Article URL:http://dx.doi.org/10.1007/cam4.76
MA1-10202 was used in immunohistochemistry to report on a case of left atrial cardiac myxoma with incidental atypical B-cell lymphoid proliferation

Human / 1:100

Cardiovascular pathology : the official journal of the Society for Cardiovascular Pathology (May 2013; 22: e5)

"Incidental Epstein-Barr virus associated atypical lymphoid proliferation arising in a left atrial myxoma: a case of long survival without any postsurgical treatment and review of the literature."


PubMed Article URL:http://dx.doi.org/10.1016/j.carpath.2012.08.002

MA1-10202 was used in immunohistochemistry to study the regulation of angiogenesis in colorectal cancer by the mineralocorticoid receptor

Human / 1:30

PloS one (Apr 2013; 8: null)

"The decrease of mineralocorticoid receptor drives angiogenic pathways in colorectal cancer."


PubMed Article URL:http://dx.doi.org/10.1371/journal.pone.0059410

MA1-10202 was used in immunohistochemistry to study giant angiofibromas in tuberous sclerosis complex

Human / 1:800

Journal of the American Academy of Dermatology (Dec 2012; 67: 1319)

"Giant angiofibromas in tuberous sclerosis complex: a possible role for localized lymphedema in their pathogenesis."


PubMed Article URL:http://dx.doi.org/10.1016/j.jaad.2012.03.021

MA1-10202 was used in immunohistochemistry to study the prognostic value of CD133 and vasculogenic mimicry in patients with non-small cell lung cancer

Human / Not Cited

BMC cancer (Nov 2012; 12: null)


Author(s): Wu S, Yu L, Wang D, Zhou L, Cheng Z, Chai D, Ma L, Tao Y

PubMed Article URL:http://dx.doi.org/10.1186/1471-2407-12-535

MA1-10202 was used in immunohistochemistry to investigate the functions of proactin in endothelial cells and its involvement in pathological angiogenesis

Human / Not Cited

Journal of cellular and molecular medicine (Sep 2012; 16: 2035)

"Functional consequences of proactin signalling in endothelial cells: a potential link with angiogenesis in pathophysiology?"

Author(s): Reuwer AQ, Nowak-Sliwinska P, Mans LA, van der Loos CM, von der Thüsen JH, Twickler MT, Spek CA, Goffin V, Griffioen AW, Borensztajn KS

PubMed Article URL:http://dx.doi.org/10.1111/j.1582-4934.2011.01499.x

MA1-10202 was used in immunohistochemistry to study the expression of thrombospondin-1 in stromal myofibroblasts and its association with gastric carcinoma growth and metastasis

Human / Not Cited

Journal of surgical oncology (Jul 2012; 106: 94)

"Overexpression of thrombospondin-1 in stromal myofibroblasts is associated with tumor growth and nodal metastasis in gastric carcinoma."

Author(s): Lin XD, Chen SQ, Qi YL, Zhu JW, Tang Y, Lin JY

PubMed Article URL:http://dx.doi.org/10.1002/jso.23037

Human / Not Cited

Medical molecular morphology (Jun 2012; 45: 110)

"Vaginal superficial myofibroblastoma: a rare mesenchymal tumor of the lower female genital tract and a study of its association with viral infection."

Author(s): Liu JL, Su TC, Shen KH, Lin SH, Wang HK, Hsu JC, Chen CJ

PubMed Article URL:http://dx.doi.org/10.1186/1471-2407-12-566-z

MA1-10202 was used in immunohistochemistry to report on a case of vaginal superficial myofibroblastoma

Human / Not Cited

Journal of Huazhong University of Science and Technology. Medical sciences = Huazhong ke ji da xue xue bao. Yi xue Yingdewen ban (Jun 2012; 32: 346)

"Overexpression of maspin in non-small cell lung cancer and its relationship to vasculogenic mimicry."

Author(s): Wu S, Yu L, Cheng Z, Song W, Zhou L, Tao Y

PubMed Article URL:http://dx.doi.org/10.1007/s11596-012-0060-4

Human / Not Cited

BMC cancer (Nov 2012; 12: null)


Author(s): Wu S, Yu L, Wang D, Zhou L, Cheng Z, Chai D, Ma L, Tao Y

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PubMed Article URL:http://dx.doi.org/10.1002/jso.23037
MA1-10202 was used in immunohistochemistry to study blood vessel stabilization and the expression of pro-angiogenic VEGF and Ang-2 in castration-resistant prostate cancer

The Prostate (May 2012; 72: 705) "Castration resistant prostate cancer is associated with increased blood vessel stabilization and elevated levels of VEGF and Ang-2."
Author(s):Tomij, TT,Gustavsson H,Wang W,Jennbacken K,Wele K,Damber JE
PubMed Article URL:http://dx.doi.org/10.1002/ pros.21472

MA1-10202 was used in immunohistochemistry to investigate the prognostic value of tumor budding in endometrioid and noneendometrioid endometrial cancers and its relationship with E-cadherin expression

Gynecologic oncology (Apr 2012; 125: 208) "Tumor budding and E-Cadherin expression in endometrial carcinoma: are they prognostic factors in endometrial cancer?"
Author(s):Koyuncuoğlu M,Okay E,Saatli B,Olga S,Akin M,Saygili U

MA1-10202 was used in immunohistochemistry to study neovascularization and the timing of endothelial cell proliferation in coronary thrombi following acute myocardial infarction

Journal of thrombosis and haemostasis : JTH (Mar 2012; 10: 466) "Early onset of endothelial cell proliferation in coronary thrombi of patients with an acute myocardial infarction: implications for plaque healing."
Author(s):Li X,Kramer MC,VAN DER Loos CM,Ploegmakers HU,DE Boer OJ,Koch KT,Tijssen JG,DE Winter RJ,VAN DER Wal AC
PubMed Article URL:http://dx.doi.org/10.1111/j.1538-7836.2012.04620.x

MA1-10202 was used in immunohistochemistry to study the prognostic value of MGMT and EGFR expression in primary gliosarcoma

Indian journal of pathology and microbiology (Jan 2012; 54: 683) "The prognostic impact of O6-methylguanine DNA methyltransferase and epidermal growth factor receptor expressions on primary gliosarcoma: a clinicopathological and immunohistochemical study of seven cases at a single institution."
Author(s):Lin JW,Wu YT,Chang IW
PubMed Article URL:http://dx.doi.org/10.4103/0377-4929.91491

MA1-10202 was used in immunohistochemistry to compare the immunohistochemical expression of CD34, alpha-smooth muscle actin and CD26 in normal stroma and tumor stroma in squamous cell carcinoma of the skin

Author(s):Kacar A,Arikok AT,Kokene Unal TD,Onder E,Hucumenoglu S,Alper M
PubMed Article URL:http://dx.doi.org/10.1007/s12253-011-9412-9

MA1-10202 was used in immunohistochemistry to study VEGF-A and Cox-2 and their correlation with vascularity, Gleason tumor grade, and androgen receptor status in prostate carcinoma

Urologia internationalis (Dec 2011; 87: 464) "The angiogenic switch for vascular endothelial growth factor-A and cyclooxygenase-2 in prostate carcinoma: correlation with microvessel density, androgen receptor content and Gleason grade."
Author(s):Gyftopoulos K,Vourda K,Sakellaropoulos G,Perimenis P,Athanasopoulos A,Papadaki E
PubMed Article URL:http://dx.doi.org/10.1119/000329289

MA1-10202 was used in immunohistochemistry to study the molecular basis of lymphatic differentiation in classic Kaposi's sarcoma

Pathology oncology research : POR (Dec 2011; 17: 843) "Lymphatic differentiation in classic Kaposi's sarcoma: patterns of D2-40 immunoexpression in the course of tumor progression."
Author(s):Kandemir NO,Barut F,Gun BD,Keser SH,Karadayi N,Gun M,Ozdamar SO
PubMed Article URL:http://dx.doi.org/10.1007/s12253-011-9392-9

Thermo Fisher Scientific
3747 N. Meridian Road
Rockford, IL 61105 USA


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MA1-10202 was used in immunohistochemistry to study the effect of morphine on tumour angiogenesis in a murine model of breast cancer

**Human / 1:100**

"Evaluation of morphine effect on tumour angiogenesis in mouse breast tumour model, EATC."

Author(s): Ustun F, Durmus-Altun G, Altaner S, Tunçbilek N, Uzal C, Berkarda S

PubMed Article URL: http://dx.doi.org/10.1007/s12032-010-9573-5

MA1-10202 was used in immunohistochemistry to evaluate a three-dimensional organ culture system for the isolation of adipose-derived stem cells

**Human / 1:100**

"Fibrin matrix-supported three-dimensional organ culture of adipose tissue for selective outgrowth, expansion, and isolation of adipose-derived stem cells."

Author(s): Yang YI, Kim HI, Shelby J, Choi MY, Jang SH, Kim JT, Jang WH, Choi CS, Cheong SH

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**Human / 1:400**

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Author(s): Chang IW, Lin JW, Wu YT

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Author(s): Ryu HS, Lee SS, Choi HS, Baek H, Koh JS

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**Human / 1:100**

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**Human / 1:400**

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Author(s): Kim HS, Joo SH, Yang DM, Lee SH, Choi SH, Lim SJ

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Author(s): Kazakov DV, Spagnolo DV, Kacerosvska D, Kempf W, Michal M
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<td>Author(s): Jara-Lazaro AR, Aghihesh M, Thike AA, Lui PC, Tse GM, Tan PH</td>
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Human / 1:50

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"The pre-lymphatic pathway, the roots of the lymphatic system in breast tissue: a 3D study."
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Human / Not Cited
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Human / 1:25
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Human / 1:50
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Human / Not Cited
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Human / 1:200
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Human / 1:800

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Human / 1:30

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Human / 0.2 mg/l

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Human / 1:50

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Human / 0.2 mg/l

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Human / 1:50

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Human / 1:50

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Human / 1:1000

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Human / 15 ug/ml

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Human / 1:75
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Human / 1:20
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Human / 1:60
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MA1-10202 was used in immunohistochemistry to study HIF-1alpha expression and tumor cell proliferation in common non-small cell lung carcinomas

**Human / 1:50**

Journal of Korean medical science (Apr 2003; 18: 196)
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"Clinical and experimental evidence of prostaglandin E1-induced angiogenesis in the myocardium of patients with ischemic heart disease."
PubMed Article URL:http://dx.doi.org/null

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Author(s):Hofmann T,Braun H,Köle W,Beham A
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Author(s):Levenberg S,Golub JS,Amit M,Itskovitz-Eldor J,Langer R
PubMed Article URL:http://dx.doi.org/10.1073/pnas.032074999

## 2 Immunohistochemistry (Paraffin) References

### Species / Dilution

<table>
<thead>
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<th>Summary</th>
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<tr>
<td>MA1-10202 was used in immunohistochemistry - paraffin section to determine the desmoplastic interface in xenograft tumor in mice comprised of stromal and endothelial cells</td>
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</table>

**Not Applicable / 1:100**

Pathology, research and practice (Dec 2015; 211: 925)
"Investigation of the origin of stromal and endothelial cells at the desmoplastic interface in xenograft tumor in mice."
Author(s):Jung M,Ryu YJ,Kang G
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MA1-10202 was used in immunocytochemistry to test if MSCs in hemangioma also reside in the perivascular region

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"Mesenchymal stem cells in human placental chorionic villi reside in a vascular Niche."

Author(s): Castrechini NM, Murthi P, Gude NM, Erwich JJ, Gronthos S, Zannettino A, Brennecke SP, Kalionis B


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"Fibronectin promotes the phorbol 12-myristate 13-acetate-induced macrophage differentiation in myeloid leukemia cells."

Author(s): Esendagligi G, Canpinar H, Yilmaz G, Kaymaz FF, Kansu E, Guc D

PubMed Article URL: http://dx.doi.org/10.1007/s12185-008-0243-8

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"1,1-Bis(3-indolyl)-1-(p-biphenyl)methane inhibits basal-like breast cancer growth in athymic nude mice."

Author(s): Su Y, Vanderlaag K, Ireland C, Oriz J, Grage H, Safe S, Frankel AE

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"Neurotrophic Schwann-cell factors induce neural differentiation of bone marrow stromal cells."

Author(s): Zurita M, Vaquero J, Oya S, Boukhovinas I

PubMed Article URL: http://dx.doi.org/10.1097/WNR.0b013e328210d0b0


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Author(s):Khurana KK,Mortelliti AJ

5 Flow Cytometry References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
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<td>Human / Not Cited</td>
<td>MA1-10202 was used in flow cytometry to investigate the regulatory role of estrogen signaling pathways in the differentiation of mesenchymal stem cells in vitro</td>
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<td>MA1-10202 was used in flow cytometry to study the role of genetic background in breast cancer phenotype and its underlying mechanism</td>
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<td>MA1-10202 was used in flow cytometry to investigate the potential of rabbit bone marrow mesenchymal stem cells to differentiate into corneal epithelial cells</td>
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<td>MA1-10202 was used in flow cytometry to investigate the utility of endothelial progenitor cells in fat grafts</td>
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<tr>
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<td>MA1-10202 was used in flow cytometry to evaluate the utility of enhanced green fluorescent protein transduction in human mesenchymal stem cells</td>
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<td>Human / Not Cited</td>
<td>Chinese medical journal (Oct 2005; 118: 1728) &quot;[Mesenchymal stem cells transduced by PLEGFP-N1 retroviral vector maintain their biological features and differentiation].&quot; Author(s):He X,LI YL,Wang XR,Guo X,Niu Y PubMed Article URL:<a href="http://dx.doi.org/null">http://dx.doi.org/null</a></td>
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</table>
Species / Dilution | Summary
---|---
Human / Not Cited | MA1-10202 was used in flow cytometry to identify adhesion molecules and study mechanisms that regulate hematopoietic stem and progenitor cell homing to the bone marrow.

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