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# Perlecan Monoclonal Antibody (A7L6)

**Catalog Number** **MA5-14641**

**Product data sheet**

| Details | |
|---|---|
| **Size** | 500 µL |
| **Host/Isotope** | Rat / IgG2a, kappa |
| **Class** | Monoclonal |
| **Type** | Antibody |
| **Clone** | A7L6 |
| **Immunogen** | Murine EHS laminin preparation |
| **Conjugate** | Unconjugated |
| **Form** | Liquid |
| **Concentration** | 0.2 mg/mL |
| **Storage Conditions** | 4° C |

| Species Reactivity | |
|---|---|
| **Published species** | Bovine, Human, Mouse, Not Applicable |

| Tested Applications | Dilution * |
|---|---|
| **Immunohistochemistry (Frozen) (IHC (F))** | 1:20 |
| **Immunohistochemistry (Paraffin) (IHC (P))** | 1:20 |

| Published Applications | |
|---|---|
| **Immunohistochemistry (IHC)** | See 9 publications below |
| **Miscellaneous PubMed (Misc)** | See 1 publications below |
| **Immunohistochemistry (Frozen) (IHC (F))** | See 1 publications below |
| **Western Blot (WB)** | 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

MA5-14641 targets Perlecan in IF, IHC (F), and IHC (P, F) applications and shows reactivity with Bovine, Human, mouse, and Porcine samples. The MA5-14641 immunogen is mouse EHS laminin preparation.

## Background/Target Information

Perlecan is a major heparan-sulfate proteoglycan (HSPG) found within all basement membranes and cell surfaces. Because of its strategic location and ability to store and protect growth factors, perlecan has been strongly implicated in the control of tumor cell growth and metastatic behavior. Perlecan possesses angiogenic and growth-promoting attributes primarily by acting as a coreceptor for basic fibroblast growth factor (FGF-2). Suppression of perlecan causes substantial inhibition of neoplastic growth and neovascularization. Thus, perlecan is a potent inducer of neoplasm growth and angiogenesis in vivo and therapeutic interventions targeting this key modulator of tumor progression may improve neoplastic treatment.

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## PubMed References For Perlecan Monoclonal Antibody (A7L6)

### 9 Immunohistochemistry References

| Species / Dilution | Summary |
|---|---|
| Mouse / 1:100 | MA514641 was used in immunohistochemistry to reveal that platelet-derived growth factor alpha and beta are coexpressed in the craniofacial mesenchyme of mid-gestation mouse embryos<br><br>Genes & development ( 2016; 30: 2443)<br>**"PDGFR regulates craniofacial development through homodimers and functional heterodimers with PDGFR."**<br>Author(s):Fantauzzo KA,Soriano P<br>PubMed Article URL:http://dx.doi.org/10.1101/gad.288746.116 |
| Human / Not Cited | MA5-14641 was used in immunohistochemistry to study the role of dystroglycan LARGE glycans in the normal functioning of skeletal muscle<br><br>Nature ( 2013; 503: 136)<br>**"LARGE glycans on dystroglycan function as a tunable matrix scaffold to prevent dystrophy."**<br>Author(s):Goddeeris MM,Wu B,Venzke D,Yoshida-Moriguchi T,Saito F,Matsumura K,Moore SA,Campbell KP<br>PubMed Article URL:http://dx.doi.org/10.1038/nature12605 |
| Mouse / Not Cited | MA5-14641 was used in Immunohistochemistry to identify a critical role for conduit-mediated fluid flow in the maintenance of PP homeostasis and mucosal immunity.<br><br>Nature immunology ( 2019; 20: 1506)<br>**"Mechanosensing by Peyer's patch stroma regulates lymphocyte migration and mucosal antibody responses."**<br>Author(s):Chang JE,Buechler MB,Gressier E,Turley SJ,Carroll MC<br>PubMed Article URL:http://dx.doi.org/10.1038/s41590-019-0505-z |
| Mouse / 1:100 | MA5-14641 was used in Immunohistochemistry to show that the tissue inhibitors of metalloprotease gene family is essential for normal bone growth after birth.<br><br>The Journal of cell biology ( 2019; 218: 3134)<br>**"Metalloprotease inhibitor TIMP proteins control FGF-2 bioavailability and regulate skeletal growth."**<br>Author(s):Saw S,Aiken A,Fang H,McKee TD,Bregant S,Sanchez O,Chen Y,Weiss A,Dickson BC,Czarny B,Sinha A,Fosang A,Dive V,Waterhouse PD,Kislinger T,Khokha R<br>PubMed Article URL:http://dx.doi.org/10.1083/jcb.201906059 |
| Human / 1:2000 | MA5-14641 was used in Immunohistochemistry to provide unique spatiotemporal insight into the behaviour of this long transcript (with implications for therapeutic approaches), and further suggest this modified multiplex ISH approach is well-suited to long genes, offering a highly tractable means to reveal complex transcriptional dynamics.<br><br>PloS one ( 2020; 15: )<br>**"Multiplex in situ hybridization within a single transcript: RNAscope reveals dystrophin mRNA dynamics."**<br>Author(s):Hildyard JCW,Rawson F,Wells DJ,Piercy RJ<br>PubMed Article URL:http://dx.doi.org/10.1371/journal.pone.0239467 |
| Mouse / 1:200 | MA5-14641 was used in immunohistochemistry to study the accelerated age-related hepatic changes observed in a murine model of Werner syndrome<br><br>The journals of gerontology. Series A, Biological sciences and medical sciences ( 2014; 69: 1076)<br>**"Liver aging and pseudocapillarization in a Werner syndrome mouse model."**<br>Author(s):Cogger VC,Svistounov D,Warren A,Zykova S,Melvin RG,Solon-Biet SM,O'Reilly JN,McMahon AC,Ballard JW,De Cabo R,Le Couteur DG,Lebel M<br>PubMed Article URL:http://dx.doi.org/10.1093/gerona/glt169 |
| Mouse / Not Cited | MA5-14641 was used in immunohistochemistry to study the role of DOT1L in regulating dystrophin expression and cardiac function<br><br>Genes & development ( 2011; 25: 263)<br>**"DOT1L regulates dystrophin expression and is critical for cardiac function."**<br>Author(s):Nguyen AT,Xiao B,Neppl RL,Kallin EM,Li J,Chen T,Wang DZ,Xiao X,Zhang Y<br>PubMed Article URL:http://dx.doi.org/10.1101/gad.2018511 |
| Mouse / Not Cited | MA5-14641 was used in immunohistochemistry to study the synthesis of syndecan-1 by skeletal muscle cells in response to Trichinella spiralis infection<br><br>Infection and immunity ( 2006; 74: 1941)<br>**"Synthesis of syndecan-1 by skeletal muscle cells is an early response to infection with Trichinella spiralis but is not essential for nurse cell development."**<br>Author(s):Beiting DP,Park PW,Appleton JA<br>PubMed Article URL:http://dx.doi.org/10.1128/IAI.74.3.1941-1943.2006 |



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|---|---|
| | MA5-14641 was used in immunohistochemistry to evaluate the usefulness of bovine endosteum-derived particles in stem cell culture |
| Bovine / Not Cited | Biomaterials ( 2010; 31: 5689)<br>**"The effect of bovine endosteum-derived particles on the proliferation of human mesenchymal stem cells."**<br>Author(s):Nigro J,White JF,Ramshaw JA,Haylock DN,Nilsson SK,Werkmeister JA<br>PubMed Article URL:http://dx.doi.org/10.1016/j.biomaterials.2010.03.054 |

**1 Miscellaneous PubMed References**

| Species / Dilution | Summary |
|---|---|
| | MA5-14641 was used in Immunohistochemistry to suggest that 89Zr-DFO-AMG102 would be a valuable companion diagnostic tool for the noninvasive selection of patients with elevated local concentrations of HGF in tumors for planning any HGF-targeted therapy, with the potential to improve clinical outcomes. |
| Human / Not Cited | Journal of nuclear medicine : official publication, Society of Nuclear Medicine ( 2017; 58: 1386)<br>**"<sup>89</sup>Zr-DFO-AMG102 Immuno-PET to Determine Local Hepatocyte Growth Factor Protein Levels in Tumors for Enhanced Patient Selection."**<br>Author(s):Price EW,Carnazza KE,Carlin SD,Cho A,Edwards KJ,Sevak KK,Glaser JM,de Stanchina E,Janjigian YY,Lewis JS<br>PubMed Article URL:http://dx.doi.org/10.2967/jnumed.116.187310 |

**1 Immunohistochemistry (Frozen) References**

| Species / Dilution | Summary |
|---|---|
| | MA5-14641 was used in immunohistochemistry - frozen section to test if direct binding of anti-DNA antibody to the glomerular basement membrane important in experimental lupus nephritis |
| Not Applicable / Not Cited | Kidney international ( 2012; 82: 184)<br>**"Anti-DNA autoantibodies initiate experimental lupus nephritis by binding directly to the glomerular basement membrane in mice."**<br>Author(s):Krishnan MR,Wang C,Marion TN<br>PubMed Article URL:http://dx.doi.org/10.1038/ki.2011.484 |

**1 Western Blot References**

| Species / Dilution | Summary |
|---|---|
| | MA5-14641 was used in western blot to investigate the influence of heparan sulfate proteoglycans on fibroblast growth factor-2 signal pathway in brain endothelial cells |
| Mouse / Not Cited | The Journal of biological chemistry ( 2003; 278: 16045)<br>**"Heparan sulfate proteoglycans as regulators of fibroblast growth factor-2 signaling in brain endothelial cells. Specific role for glypican-1 in glioma angiogenesis."**<br>Author(s):Qiao D,Meyer K,Mundhenke C,Drew SA,Friedl A<br>PubMed Article URL:http://dx.doi.org/10.1074/jbc.M211259200 |



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