

DESCRIPTION

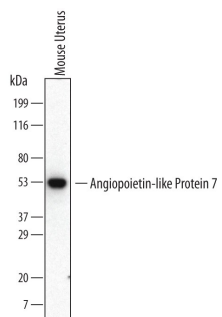
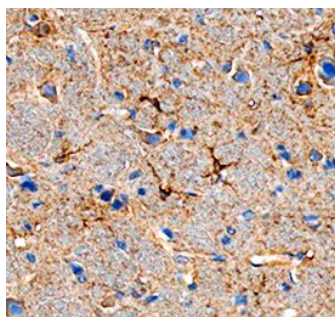
Species Reactivity	Mouse
Specificity	Detects mouse Angiotensin-like Protein 7/ANGPTL7 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human (rh) Angiotensin-like 1, 5, 7, recombinant mouse (rm) Angiotensin-like 2, 3, 4, 6, rhAngiotensin-1, rhAngiotensin-4, rmAngiotensin-2, or rmAngiotensin-3 is observed.
Source	Monoclonal Rat IgG _{2B} Clone # 538401
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse Angiotensin-like Protein 7/ANGPTL7 Gln22-Pro337 (predicted) Accession # Q8R1Q3
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

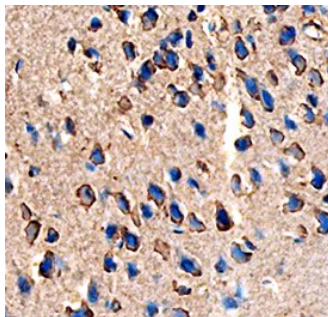
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Mouse Angiotensin-like Protein 7/ANGPTL7 by Western Blot. Western blot shows lysates of mouse uterus tissue. PVDF membrane was probed with 1 µg/mL of Rat Anti-Mouse Angiotensin-like Protein 7/ANGPTL7 Monoclonal Antibody (Catalog # MAB4960) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for Angiotensin-like Protein 7/ANGPTL7 at approximately 53 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunohistochemistry</p>  <p>Angiotensin-like Protein 7/ANGPTL7 in Mouse Brain. Angiotensin-like Protein 7/ANGPTL7 was detected in perfusion fixed frozen sections of mouse brain using Rat Anti-Mouse Angiotensin-like Protein 7/ANGPTL7 Monoclonal Antibody (Catalog # MAB4960) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Rat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS017) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in glia. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.</p>
--	---

<p>Immunohistochemistry</p>  <p>Angiotensin-like Protein 7/ANGPTL7 in Mouse Brain. Angiotensin-like Protein 7/ANGPTL7 was detected in perfusion fixed frozen sections of mouse brain using Rat Anti-Mouse Angiotensin-like Protein 7/ANGPTL7 Monoclonal Antibody (Catalog # MAB4960) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Rat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS017) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in neurons. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.</p>
--

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Angiotensin-like Protein 7 (ANGPTL7), also known as Corneal-Derived Transcript 6 (CDT6), is a secreted, 45-50 kDa glycoprotein member of the angiotensin-like family of molecules. Members of this protein family contain an N-terminal coiled coil domain and a C-terminal fibrinogen-like domain (1-3). Mature mouse ANGPTL7 is 316 amino acids (aa) in length. It shares 88% and 98% aa sequence identity with human and rat ANGPTL7, respectively. The ANGPTL7 monomer forms homotetramers via its coiled coil domain (4, 5). ANGPTL7 is expressed in the corneal stroma, trabecular meshwork, and sclera (3, 5). Its production is up-regulated in trabecular meshwork cells by glucocorticoids and TGF- β and in cartilage by TNF- α (5-7). ANGPTL7 expression is up-regulated under conditions of increased ocular pressure (IOP). Since IOP is a risk factor for glaucoma, ANGPTL7 may represent a defense mechanism to reduce pressure on the retina. It appears that IOP is a consequence of increased ECM deposition, a major component of which is fibronectin. In this regard, ANGPTL7 is reported to both decrease fibronectin expression and promote MMP1 expression, actions that would tend to reduce organized ECM deposition (8). When overexpressed in tumor cells, it promotes collagen and proteoglycan deposition but inhibits tumor xenograft progression and tumor angiogenesis (4). ANGPTL7, when used in combination with SCF, Thrombopoietin, IGF-II, and FGF acidic, enhances the expansion and engraftment of human and mouse hematopoietic stem cells (9).

References:

1. Oike, Y. *et al.* (2009) *Circ. J.* **73**:2192.
2. Miida, T. and S. Hirayama (2010) *Curr. Opin. Lipidol.* **21**:70.
3. Peek, R. *et al.* (1998) *Invest. Ophthalmol. Vis. Sci.* **39**:1782.
4. Peek, R. *et al.* (2002) *J. Biol. Chem.* **277**:686.
5. Kuchtey, J. *et al.* (2008) *Invest. Ophthalmol. Vis. Sci.* **49**:3438.
6. Nehme, A. *et al.* (2009) *BMC Med. Genomics* **2**:58.
7. Stevens, A.L. *et al.* (2008) *Arthritis Rheum.* **58**:489.
8. Comes, N. *et al.* (2011) *Genes Cells* **16**:243.
9. Zhang, C.C. *et al.* (2006) *Nat. Med.* **12**:240.