CLAIMS

What is claimed is:

1 An antibody, or an antigen binding fragment thereof, which specifically binds human Angiopoietin-Like Protein 7 (ANGPTL7), optionally wherein said human ANGPTL7 is a polypeptide which comprises or consists of the amino acid sequence of any one of SEQ ID NOs: 370 to 374.

2. The antibody, or an antigen binding fragment thereof, of claim 1, which exhibits any one or more the following functional characteristics:

a. increases outflow facility compared to a control when administered to the eye of a subject, optionally wherein the control is vehicle treatment, dexamethasone treatment, ANGPTL7 protein treatment, or ANGPTL7 protein with an isotype control antibody treatment; and/or
b. binds to ANGPTL7 with a K_D of about 100nM or lower; and/or
c. binds to the same epitope on ANGPTL7 as an antibody comprising the VH and VL sequences of any one of the exemplary antibodies the sequences of which are provided in Table 11; and/or
d. competes for binding to ANGPTL7 with an antibody comprising the VH and VL sequences of any one of the exemplary antibodies the sequences of which are provided in Table 11.

3. The antibody, or an antigen binding fragment thereof, of claim 1 or claim 2, which is monoclonal, optionally recombinant.

4. The antibody, or an antigen binding fragment thereof, of any one of claims 1 to 3, which is human, humanized or chimeric.

5. The antibody, or an antigen binding fragment thereof, of any one of claims 1 to 4, which is a full length antibody, a single chain antibody, a single chain variable fragment (scFv), a variable fragment (Fv), a fragment antigen-binding region (Fab), a Fab-C, a Fab'-SH, a (Fab')2,

a single-domain antibody (sdAb), a VHH antibody, a nanobody, a camelid-derived single-domain antibody, a shark IgNAR-derived single-domain antibody fragment (VNAR), a diabody, a triabody, an anticalin or an aptamer, optionally wherein the antibody is a full length antibody comprising an Fc region such as a human IgG1, IgG2, IgG3 or IgG4 region.

6. The antibody, or an antigen binding fragment thereof, of any one of claims 1 to 5, which is conjugated to at least one additional moiety, optionally selected from:

a. an antigen binding moiety, such as an antibody or antigen-binding fragment thereof, which is capable of specific binding to a target which is not human ANGPTL7, preferably wherein said target is expressed in the human eye;
b. a therapeutic or cytotoxic moiety;
c. a detection moiety;
d. a purification moiety;
e. a half-life extension moiety, optionally a polypeptide that is at least 20 amino acids in length and comprises any combination of G, A, S T, E, and P residue, which polypeptide is conjugated to the C- or N- terminus of the antibody.

7. The antibody, or an antigen binding fragment thereof, of any one of claims 1 to 6, which is a polypeptide comprising:

a. one, two or all three HCDRs of any one of the exemplary antibodies the sequences of which are provided in Table 11, and optionally also one, two or all three of the corresponding LCDRs of said exemplary antibody; and/or
b. a VH sequence having at least 90% identity to the VH sequence of any one of the exemplary antibodies the sequences of which are provided in Table 11, and optionally also a VL sequence having at least 90% identity to the corresponding VL sequence of said exemplary antibody, preferably wherein variation is not permitted in the HCDRs or LCDRs; and/or
c. all six CDRs of any one of the exemplary antibodies the sequences of which are provided in Table 11; and/or
d. the VH and VL sequences of any one of the exemplary antibodies the sequences of which are provided in Table 11; and/or

e. the full length heavy chain (VH + constant) sequence of any one of the exemplary antibodies the sequences of which are provided in Table 11, and optionally also the corresponding full length light chain (VL + constant) sequence of said exemplary antibody.

8. A polynucleotide encoding an antibody, or an antigen binding fragment thereof, of any one of claims 1 to 7, optionally wherein said polynucleotide comprises or consists of a nucleic acid sequence having at least 70%, 80%, 90% or 100% identity to a nucleic acid sequence of any one of the exemplary antibodies the sequences of which are provided in Table 11.

9. An expression vector comprising the polynucleotide of claim 8, which is optionally an adeno-associated virus (AAV) vector, a lentiviral (LV) vector, a herpes simplex virus (HSV) vector, or a retrovirus vector.

10. A pharmaceutical composition comprising an antibody, or an antigen binding fragment thereof, a polynucleotide, or a vector according to any one of the preceding claims, and optionally:

a. at least one pharmaceutically acceptable carrier, diluent or preservative; and/or
b. at least one additional active ingredient.

11. The pharmaceutical composition of claim 10, which is suitable for ocular administration to a subject, optionally by delivery using a conjunctival insert, a contact lens, a gel, a nanoparticle, a mucoadhesive polymer, an ointment, a solution, a suspension, eye drops, and/or an implant, preferably by injection into the vitreous fluid.

12. The antibody, or an antigen binding fragment thereof, according to any one of claims 1 to 7, the polynucleotide of claim 8, the vector of claim 9, or the composition of claim 10 or 11, for use as a medicament, optionally for use in a method of treating a disease of the eye in a subject.

13. The antibody, fragment, polynucleotide, vector, or composition for use according to claim 12, wherein said disease is characterized by increased intraocular pressure and/or reduced outflow facility in the eye of the subject.

14. The antibody, fragment, polynucleotide, vector or composition for use according to claim 12 or 13, wherein the method comprises ocular administration of the antibody, preferably by injection into the vitreous fluid, and wherein said administration preferably relieves at least one symptom in the subject selected from eye pain, eye pressure, headaches, rainbow-colored halos around lights, low vision, blurred vision, narrowed vision, impaired peripheral vision, blind spots, nausea, vomiting, and red eyes.

15. The antibody, fragment, polynucleotide, vector or composition for use according to any one of claims 12 to 14, where the disease is glaucoma and/or a disease affecting the optic nerve or retinal ganglion cells, optionally wherein said glaucoma is primary or glucocorticoid-induced glaucoma.