CLAIMS

1. An isolated antibody or antigen-binding fragment thereof that specifically binds human platelet derived growth factor receptor beta (PDGFR-beta), wherein the antibody or antigen-binding fragment thereof comprises:

three heavy chain complementarity determining regions (HCDR1, HCDR2 and HCDR3) comprising SEQ ID NOs: 132, 134 and 136, respectively; and

three light chain complementarity determining regions (LCDR1, LCDR2 and LCDR3) comprising SEQ ID NOs: 140, 142 and 144, respectively.

2. The isolated antibody or antigen-binding fragment of claim 1, wherein the antibody or antigen-binding fragment thereof comprises a heavy chain variable region (HCVR) comprising SEQ ID NO:130, and a light chain variable region (LCVR) comprising SEQ ID NO.138.

3. The isolated antibody or antigen-binding fragment according to claim 1 with a binding dissociation equilibrium constant (KD) of less than 30 nM as measured in a surface plasmon resonance assay at 37°C.

4. The antibody or antigen-binding fragment of claim 3, wherein the antibody or antigen-binding fragment thereof specifically binds monomeric PDGFR-beta with a KD of less than 10 nM as measured in a surface plasmon resonance assay at 37°C.

5. An isolated antibody or antigen-binding fragment thereof according to claim 1 with a binding dissociation equilibrium constant (KD) of less than 200 pM as measured in a surface plasmon resonance assay at 37°C.

6. The isolated antibody or antigen-binding fragment of any one of claims 1 to 5, wherein the antibody or antigen-binding fragment thereof blocks binding of at least one PDGF ligand to PDGFR-beta.

7. The isolated antibody or antigen-binding fragment of claim 6, wherein the antibody or antigen-binding fragment thereof blocks PDGF-BB ligand binding to soluble monomeric PDGFR-beta with an IC50 value of less than 300 pM as measured in an in vitro receptor/ligand binding assay at 25°C.

8. The antibody or antigen-binding fragment of claim 7, wherein the antibody or antigen-binding fragment thereof blocks PDGF-BB ligand binding to soluble monomeric

PDGFR-beta with an IC50 value of less than 50 pM as measured in an in vitro receptor/ligand binding assay at 25°C.

9. The antibody or antigen-binding fragment of any one of claims 3 to 8, wherein the antibody or antigen-binding fragment thereof inhibits PDGF ligand-mediated activation of PDGFR-beta signaling in cells that express PDGFR-beta.

10. A pharmaceutical composition comprising the antibody or antigen-binding fragment of any one of claims 1 to 9, and a pharmaceutically acceptable carrier or diluent.

11. Use of the composition according to claim 10 in the manufacture of a medicament for the treatment of eye disease treatable by inhibiting PDGFR-beta activity.

12. The use of claim 11, wherein the eye disease is selected from the group consisting of age-related macular degeneration (AMD), exudative AMD, diabetic retinopathy, central retinal vein occlusion (CRVO), iris neovascularization, neovascular glaucoma, postsurgical fibrosis in glaucoma, proliferative vitreoretinopathy (PVR), choroidal neovascularization, optic disc neovascularization, corneal neovascularization, retinal neovascularization, vitreal neovascularization, pannus, pterygium, macular edema, diabetic macular edema (DME), vascular retinopathy, retinal degeneration, uveitis, and inflammatory diseases of the eye.

13. A pharmaceutical composition comprising the antibody or antigen-binding fragment of any one of claims 1 to 9, a VEGF antagonist, and a pharmaceutically acceptable carrier or diluent.

14. The pharmaceutical composition of claim 13, wherein the VEGF antagonist is a VEGF-inhibiting fusion protein or an anti-VEGF antibody or antigen binding fragment of an anti-VEGF antibody.

15. The pharmaceutical composition of claim 14, wherein the VEGF antagonist is aflibercept, bevacizumab or ranibizumab.

16. Use of a pharmaceutical composition according to any one of claims 13 to 15 in the manufacture of a medicament for the treatment of eye disease treatable by inhibiting PDGFR-beta activity.

17. The use of claim 16, wherein the eye disease is selected from the group consisting of age-related macular degeneration (AMD), exudative AMD, diabetic retinopathy, central retinal vein occlusion (CRVO), iris neovascularization, neovascular glaucoma, postsurgical fibrosis in glaucoma, proliferative vitreoretinopathy (PVR), choroidal

neovascularization, optic disc neovascularization, corneal neovascularization, retinal neovascularization, vitreal neovascularization, pannus, pterygium, macular edema, diabetic macular edema (DME), vascular retinopathy, retinal degeneration, uveitis, and inflammatory diseases of the eye.

18. Use of a combination of (i) the antibody or antigen-binding fragment of any one of claims 1 to 9; and (ii) aflibercept in the manufacture of a medicament for the treatment of age-related macular degeneration (AMD).

19. The use of claim 18, wherein the antibody or antigen-binding fragment thereof is to be administered to the subject prior to, concurrent with, or after administration of aflibercept to the subject.

20. The use of claim 18 or 19, wherein the antibody or antigen-binding fragment thereof and aflibercept are to be administered to the subject together in a single formulation.

21. The use of claim 18 or 19, wherein the antibody or antigen-binding fragment thereof and aflibercept are to be administered to the subject in separate dosage forms.

22. Use of the pharmaceutical composition of claim 10 or 13 in the manufacture of a medicament for inhibiting tumor growth in a subject afflicted with a tumor.

23. The use of claim 22, wherein the tumor is selected from the group consisting of a renal tumor, a pancreatic tumor, a head and neck tumor, a breast tumor, a prostate tumor, a colon tumor, a gastric tumor, and ovarian tumor, a lung tumor, and a skin tumor.

24. The use of a pharmaceutical composition according to claim 10 or 13 in the manufacture of a medicament for the treatment of a fibrotic condition.

25. The use of claim 24, wherein the fibrotic condition is pulmonary fibrosis, ocular fibrosis, skin fibrosis, kidney fibrosis, or liver fibrosis.