

CLAIMS

1. An antigen-binding molecule that specifically binds to Myosin Heavy Chain 9 (MYH9), wherein the antigen-binding molecule comprises:
 - a) a heavy chain variable (VH) region comprising the VHCDR1 amino acid sequence GYSITSDYAWN (SEQ ID NO: 1), the VHCDR2 amino acid sequence YISYSGSTNYPNPSLKS (SEQ ID NO: 2) and the VHCDR3 amino acid sequence NPPFVY (SEQ ID NO: 3); and
 - b) a light chain variable (VL) region comprising the VLCDR1 amino acid sequence TASSGVSSGYLH (SEQ ID: 4), the VLCDR2 amino acid sequence STSNLAS (SEQ ID NO: 5) and the VLCDR3 amino acid sequence HQYHRSPFT (SEQ ID NO: 6).
2. The antigen-binding molecule of claim 1, wherein the MYH9 is canine MYH9.
3. The antigen-binding molecule of claim 1 or 2, wherein the MYH9 is a glycosylated MYH9.
4. The antigen-binding molecule of any one of claims 1 to 3, wherein the antigen-binding molecule comprises:
 - a) a VH region comprising an amino acid sequence having at least 70% sequence identity to
 QVQLQESGPGLVKPSQSLTCTVTGYSITSDYAWNWLRFPGNKLEWM
 GYISYSGSTNYPNPSLKSRLSITRDTSKNQFFLQLNSVTTEDTATYYCARNPP
 FVYWGQGTLVTVST (SEQ ID NO: 7); and
 - b) a VL region comprising an amino acid sequence having at least 70% sequence identity to
 QIVLTQSPAIMSASLGERVTMTCTASSGVSSGYLHWYQQKPGSSPKLWIY
 STSNLASGVPARFSGSGSGTSYSLTISSMEAEDAATYYCHQYHRSPFTFGS
 GTKLEIERADAAPTVS (SEQ ID NO: 8).

5. The antigen-binding molecule of any one of claims 1 to 4, wherein the antigen binding molecule is an antibody or antigen-binding fragment thereof.
6. The antigen-binding molecule of claim 5, wherein the antibody or antigen-binding molecule thereof is caninized or chimerized.
7. The antigen-binding molecule of claim 5 or 6, wherein the antibody or antigen binding fragment thereof is a full-length antibody, a substantially intact antibody, a Fab fragment, a scFab, a Fab', a single chain variable fragment (scFv) or a one-armed antibody.
8. The antigen-binding molecule of any one of claims 1 to 7, wherein the antigen-binding molecule is capable of being internalized into a cell.
9. A chimeric molecule comprising an antigen-binding molecule according to any one of the preceding claims and a heterologous moiety.
10. The chimeric molecule of claim 9, wherein the heterologous moiety is a detectable moiety, a half-life extending moiety or a therapeutic moiety.
11. The chimeric molecule of claim 10, wherein the therapeutic moiety is a toxin.
12. The chimeric molecule of claim 11, wherein the toxin is auristatin or saporin.
13. The chimeric molecule of any one of claims 9 to 12, wherein the chimeric molecule is capable of being internalized into a cell.
14. An isolated polynucleotide comprising a nucleic acid sequence encoding the antigen-binding molecule according to any one of claims 1 to 8, or the chimeric molecule of any one of claims 9 to 13.

15. A construct comprising a polynucleotide of claim 14 in operable connection with one or more control sequences.
16. A host cell that contains the construct of claim 15.
17. A pharmaceutical composition comprising an antigen-binding molecule according to any one of claims 1 to 8 or a chimeric molecule according to any one of claims 9 to 13.
18. An antigen-binding molecule according to any one of claims 1 to 8, a chimeric molecule according to any one of claims 9 to 13 or a pharmaceutical composition according to claim 17 for use as a medicament.
19. An *in vitro* method for reducing or inhibiting proliferation and/or viability of a canine cancer cell, the method comprising contacting the cancer cell with a therapeutically effective amount of a chimeric molecule according to any one of claims 9 to 13 or a pharmaceutical composition according to claim 17, wherein the chimeric molecule comprises a therapeutic moiety, and wherein the cancer cell is a cancer cell selected from a mast cell tumor, a mammary carcinoma, a hepatocellular carcinoma, a urothelial carcinoma, a histiocytic sarcoma, a Leydig cell tumor or a seminoma.
20. Use of a chimeric molecule according to any one of claims 9 to 13 or a pharmaceutical composition according to claim 17 in the manufacture of a medicament for treating a cancer in a canine subject, wherein the chimeric molecule comprises a therapeutic moiety, and wherein the cancer is selected from a mast cell tumor, a mammary carcinoma, a hepatocellular carcinoma, a urothelial carcinoma, a histiocytic sarcoma, a Leydig cell tumor or a seminoma.
21. A method of detecting the likelihood of the presence of a cancer in a canine subject, the method comprising contacting a sample obtained from the subject with an antigen-binding molecule according to any one of claims 1 to 8 or a

chimeric molecule according to any one of claims 9 to 13 to determine the level of MYH9 in the sample, wherein an increased level of MYH9 as compared to a reference indicates the likelihood of the presence of a cancer in the subject, wherein the cancer is selected from a mast cell tumor, a mammary carcinoma, a hepatocellular carcinoma, a urothelial carcinoma, a histiocytic sarcoma, a Leydig cell tumor or a seminoma.

22. The method of claim 21, wherein the sample is a cell, tissue or blood sample.
23. A method of predicting the prognosis of a cancer in a canine subject, the method comprising contacting a sample obtained from the subject with an antigen-binding molecule according to any one of claims 1 to 8 or a chimeric molecule according to any one of claims 9 to 13 to determine the level of MYH9 in the sample, wherein an increased level of MYH9 as compared to a reference indicates a likelihood of a poor prognosis associated with tumor invasiveness in the subject, wherein the cancer is selected from a mast cell tumor, a mammary carcinoma, a hepatocellular carcinoma, a urothelial carcinoma, a histiocytic sarcoma, a Leydig cell tumor or a seminoma.