CLAIMS

1. An isolated anti-human MCAM antibody, or antigen binding fragment thereof, wherein said antibody or antigen binding fragment thereof binds to an epitope of human MCAM defined by a combination of MCAM domains 1 and 2 and inhibits interaction of human MCAM with laminin-α4.

2. The isolated anti-MCAM antibody, or antigen binding fragment thereof, of claim 1 said antibody or antigen binding fragment thereof comprising three light chain hypervariable regions (HVR-L1, HVR-L2, and HVR-L3) and three heavy chain hypervariable regions (HVR-H1, HVR-H2, and HVR-H3), wherein:

(a) HVR-L1 comprises the amino acid sequence of SEQ ID NO:73, HVR-L2 comprises the amino acid sequence of SEQ ID NO:74, HVR-L3 comprises the amino acid sequence of SEQ ID NO:75, HVR-H1 comprises the amino acid sequence of SEQ ID NO:78 or SEQ ID NO:141, HVR-H2 comprises the amino acid sequence of SEQ ID NO:79, and HVR-H3 comprises the amino acid sequence of SEQ ID NO:80; or

(b) HVR-L1 comprises the amino acid sequence of SEQ ID NO:85, HVR-L2 comprises the amino acid sequence of SEQ ID NO:86, HVR-L3 comprises the amino acid sequence of SEQ ID NO:87, HVR-H1 comprises the amino acid sequence of SEQ ID NO:90, HVR-H2 comprises the amino acid sequence of SEQ ID NO:91, and HVR-H3 comprises the amino acid sequence of SEQ ID NO:92.

3. The isolated anti-MCAM antibody, or antigen binding fragment thereof, of claim 2, said antibody or antigen binding fragment thereof comprising a light chain variable region and a heavy chain variable region, wherein:

(e) the light chain variable region comprises the amino acid sequence of any one of SEQ ID NOS:70, 71, or 72 and the heavy chain variable region comprises the amino acid sequence of SEQ ID NO:77; or

(f) the light chain variable region comprises the amino acid sequence of any one of SEQ ID NOS:83 or 84 and the heavy chain variable region comprises the amino acid sequence of SEQ ID NO:89.

4. The isolated antibody of any preceding claim, which is a chimeric or humanized antibody.

5. The isolated antibody of any preceding claim, which is an IgG1 antibody.

6. The isolated antibody of any preceding claim, or antigen binding fragment thereof, which is produced in bacteria or CHO cells.

7. A pharmaceutical composition comprising an antibody, or antigen binding fragment thereof, of any preceding claim.

8. An article of manufacture comprising the pharmaceutical composition of Claim 7.

9. Use of an anti-MCAM antibody, or antigen binding fragment thereof, according to any one of claims 1 to 6, in the manufacture of a medicament for the treatment of an inflammatory disorder characterized by infiltration of MCAM-expressing cells into a site of inflammation in the body.

10. Use of an anti-MCAM antibody, or antigen binding fragment thereof, according to any one of claims 1 to 6, in the manufacture of a medicament for the treatment of a central nervous system (CNS) inflammatory disorder characterized by infiltration of MCAM-expressing cells into the CNS.

11. Use of an anti-MCAM antibody, or antigen binding fragment thereof, according to any one of claims 1 to 6, in the manufacture of a medicament for the treatment of multiple sclerosis.

12. Use of an anti-MCAM antibody, or antigen binding fragment thereof, according to any one of claims 1 to 6, in the manufacture of a medicament for the treatment of psoriasis.

13. Use of an anti-MCAM antibody, or antigen binding fragment thereof, according to any one of claims 1 to 6, in the manufacture of a medicament for the treatment of a solid tumor, such as melanoma, expressing MCAM.

14. Use of an anti-MCAM antibody, or antigen binding fragment thereof, according to any one of claims 1 to 6, in the manufacture of a medicament for the treatment of sarcoidosis.

15. Use of an anti-MCAM antibody, or antigen binding fragment thereof, according to any one of claims 1 to 6, in the manufacture of a medicament for the treatment of any of psoriatic arthritis.

16. Use of an anti-MCAM antibody, or antigen binding fragment thereof, according to any one of claims 1 to 6, in the manufacture of a medicament for the treatment of Parkinson's disease.

17. Use of an anti-MCAM antibody, or antigen binding fragment thereof, according to any one of claims 1 to 6, in the manufacture of a medicament for the treatment of allergic contact dermatitis.

18. An isolated anti-MCAM antibody, or antigen binding fragment thereof, said antibody or antigen binding fragment thereof comprising three light chain hypervariable regions (HVR-L1, HVR-L2, and HVR-L3) and three heavy chain hypervariable regions (HVR-H1, HVR-H2, and HVR-H3), wherein HVR-L1 comprises the amino acid sequence of SEQ ID NO:85, HVR-L2 comprises the amino acid sequence of SEQ ID NO:86, HVR-L3 comprises the amino acid sequence of SEQ ID NO:87, HVR-H1 comprises the amino acid sequence of SEQ ID NO:90, HVR-H2 comprises the amino acid sequence of SEQ ID NO:91, and HVR-H3 comprises the amino acid sequence of SEQ ID NO:92.

19. The isolated anti-MCAM antibody, or antigen binding fragment thereof of claim 18, comprising a heavy chain variable region having at least 95% sequence identity to any of SEQ ID NOS: 102, 103 and 104 and a light chain variable region having at least 95% sequence identity to SEQ ID NO:111.

20. The isolated anti-MCAM antibody, or antigen binding fragment thereof, of claim 19 comprising a heavy chain variable region having the sequence of any of SEQ ID NOS: 102, 103 and 104 and a light chain variable region having the sequence of SEQ ID NO:111.

21. An isolated anti-MCAM antibody, or antigen binding fragment thereof, said antibody or antigen binding fragment thereof comprising three light chain hypervariable regions (HVR-L1, HVR-L2, and HVR-L3) and three heavy chain hypervariable regions (HVR-H1, HVR-H2, and HVR-H3),

wherein HVR-L1 comprises the amino acid sequence of SEQ ID NO:73, HVR-L2 comprises the amino acid sequence of SEQ ID NO:74, HVR-L3 comprises the amino acid sequence of SEQ ID NO:75, HVR-H1 comprises the amino acid sequence of SEQ ID NO:141, HVR-H2 comprises the amino acid sequence of SEQ ID NO:79, and HVR-H3 comprises the amino acid sequence of SEQ ID NO:80.

22. The isolated anti-MCAM antibody, or antibody binding fragment thereof, of claim 20, wherein the antibody comprises a heavy chain having at least 95% sequence identity to SEQ ID NO:119 and a light chain variable region having at least 95% sequence identity to SEQ ID NO:123.

23. The isolated anti-MCAM antibody, or antigen binding fragment of claim 21, wherein the antibody comprises a heavy chain variable region having at least 99% sequence identity to SEQ ID NO:119 and a light chain variable region having the sequence of SEQ ID NO:123.