Claims

1. Use of an anti-adrenomedullin (ADM) antibody or an anti-adrenomedullin antibody fragment in the manufacture of a medicament for therapy of a patient with shock, wherein said patient :

   has suffered from shock not longer than 10 hours at the starting point of treatment with said Anti-adrenomedullin (ADM) antibody or an anti-adrenomedullin antibody fragment, and/or

   wherein said Anti-adrenomedullin (ADM) antibody or anti-adrenomedullin antibody fragment is administered within 10 hours after occurrence of shock in said patient, and wherein said antibody or fragment binds to the N-terminal part (aa 1-21) of ADM: YRQSMNNFQGLRSFGCRFGTC (SEQ ID No. 4).

2. The use according to claim 1, wherein said patient has suffered from shock not longer than 8.4 hours at the starting point of treatment with said Anti-adrenomedullin (ADM) antibody or anti-adrenomedullin antibody fragment, and/or wherein said anti-ADM antibody or anti-adrenomedullin antibody fragment is administered within 8.4 hours after occurrence of shock in said patient.

3. The use according to claim 1 or 2, wherein said patient has shock that is selected from the group comprising shock due to hypovolemia, cardiogenic shock, obstructive shock and distributive shock.

4. The use according to claim 3, wherein the shock is cardiogenic shock, septic shock, shock due to Covid-19, shock due to burns or traumatic shock.

5. The use according to claim 3 or 4, wherein said patient has septic shock.

6. The use according to any of claims 1 to 5, wherein a sample of bodily fluid taken said patient exhibits a level of bioADM>70 pg/mL and/or wherein a sample of bodily fluid taken from said patient exhibits a level of DPP3 <50 ng/mL, and wherein said bodily fluid is selected from the group comprising whole blood, plasma or serum.

7. The use according to any one of claims 1 to 6, wherein said antibody or antibody fragment is monospecific.

8. The use according to any of claims 1 to 7, wherein said antibody or fragment exhibits a binding affinity to ADM of at least 10^{-7} M by label-free surface plasmon resonance using a Biacore 2000 system.

9. The use according to claim 8, wherein the antibody or fragment exhibits a binding affinity to ADM of between 1 x 10^{-9} to 3 x 10^{-9} by label-free surface plasmon resonance using a Biacore 2000 system.

10. The use according to any one of claims 1 to 9, wherein the anti-ADM antibody or is an IgG1 antibody.

11. The use according to any of the preceding claims, wherein said subject undergoes chemotherapy, vasopressors, treatment with biologics, antibiotics, or treatment with anti-viral compounds.

12. The use according to any of the preceding claims, wherein said antibody or fragment is a human monoclonal antibody or fragment that binds to ADM or an antibody fragment thereof wherein the heavy chain comprises the sequences:

CDR1: SEQ ID NO: 5

GYTFSRYW

CDR2: SEQ ID NO: 6

ILPGSGST

CDR3: SEQ ID NO: 7

TEGYEYDGFDY

and wherein the light chain comprises the sequences:

CDR1: SEQ ID NO: 8

QSIVYSNGNTY

CDR2:

RVS

CDR3: SEQ ID NO: 9

FQGSHIPYT.

13. The use according to claim 12, wherein said antibody or fragment comprises the following sequence as a heavy chain:

SEQ ID NO: 22

QVQLVQSGAEVKKPGSSVKVSCKASGYTFSRYWIEWVRQAPGQGLEWIGEILPG
SGSTNYNQKFQGRVTITADTSTSTAYMELSSLRSEDTAVYYCTEGYEYDGFDYW
GQGTTVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGA
LTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPK
SCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVK
FNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNK
ALPAPIEKTISKAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWE
SNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHY
TQKSLSLSPGK

or a sequence that is > 95% identical to it,

and comprises the following sequence as a light chain:

SEQ ID NO: 23

DVVLTQSPLSLPVTLGQPASISCRSSQSIVYSNGNTYLEWYLQRPGQSPRLLIYRVS
NRFSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCFQGSHIPYTFGGGTKLEIKR
TVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESV
TEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

or a sequence that is > 95% identical to it.

14. The use according to any one of claims 1 to 13, wherein the anti-adrenomedullin (ADM) antibody or anti-ADM antibody fragment binds to the N-terminal part (amino acid 1-10) of ADM: YRQSMNNFQG (SEQ ID No. 25).

15. Use of a pharmaceutical formulation comprising an anti-ADM antibody or an anti-ADM antibody fragment according to any of claims 1 to 14 in the manufacture of a medicament for therapy of a patient with shock, in particular septic shock.