CLAIMS

1. An isolated neutralising monoclonal antibody or a fragment thereof that is capable of specifically binding to at least one epitope of Enterovirus 71 (EV71), wherein the antibody is of subclass immunoglobulin M, wherein the epitope is of SEQ ID NO: 1 and wherein the antibody is monoclonal antibody Mab51 produced by hybridoma cell line deposited with American Type Culture Collection (ATCC) with accession number CBA20110005.

~~2. The antibody according to claim 1, wherein the epitope is of SEQ ID NO:1.~~

~~3. The antibody according either claim 1 or 2, wherein the antibody has substantially the immunological binding characteristics of monoclonal antibody Mab51.~~

~~4. The antibody according to any one of the preceding claims, wherein the antibody is selected from the group consisting of:~~

~~(a) antibody produced by hybridoma cell line CBA20110005;~~

~~(b) antibody having the binding characteristics of the antibody produced by hybridoma cell line CBA20110005; and~~

~~(c)~~(a) ~~antibody that binds to an antigen capable of binding the antibody produced by the hybridoma cell line CBA20110005.~~

~~5. The antibody according to claim 1, wherein the epitope is at least one conformational epitope of EV71.~~

~~6. The antibody according to claim, wherein the conformational epitope is an intact virus capsid.~~

~~7. The antibody according to claim 6, wherein the capsid protein is VP1, VP2 VP3, VP4 and/or VP0 precursor.~~

~~8~~2. An isolated neutralizing monoclonal antibody or a fragment thereof that is capable of specifically binding to at least one epitope of Enterovirus 71 (EV71), wherein the antibody is of subclass immunoglobulin M,~~The antibody according to any one of claims 1 and 5 to 7~~ wherein the antibody ~~has substantially the immunological binding characteristics of~~ is monoclonal antibody Mab57 produced by hybridoma cell line deposited with American Type Culture Collection (ATCC) with accession number CBA20110007.

~~5~~3. The antibody according to claim 1 or 2, wherein the epitope is at least one conformational epitope of EV71.

~~6~~4. The antibody according to claim 3, wherein the conformational epitope is an intact virus capsid.

~~7~~5. The antibody according to claim 4, wherein the capsid protein is VP1, VP2 VP3, VP4 and/or VP0 precursor.

~~9. The antibody according to any one of claims 1 and 5 to 8, wherein the antibody is selected from the group consisting of:~~

~~(a) antibody produced by hybridoma cell line CBA20110007;~~

~~(b) antibody having the binding characteristics of the antibody produced by hybridoma cell line CBA20110007; and~~

~~(c) antibody that binds to an antigen capable of binding the antibody produced by the hybridoma cell line CBA20110007.~~

~~10~~6. An isolated monoclonal antibody or a fragment thereof, wherein the antibody is capable of specifically binding to at least one epitope of Enterovirus 71 (EV71) of SEQ ID NO: 1, wherein the antibody is of subclass immunoglobulin G, wherein the antibody is monoclonal antibody Mab53 produced by hybridoma cell line deposited with American Type Culture Collection (ATCC) with accession number CBA20110006.

~~11. The antibody according to claim 10, wherein the antibody has substantially the immunological binding characteristics of monoclonal antibody Mab53.~~

~~12. The antibody according to either claim 10 or 11, wherein the antibody is of subclass immunoglobulin G.~~

~~13. The antibody according to any one of claims 10 to 12, wherein the antibody is selected from the group consisting of:~~

~~(a) antibody produced by hybridoma cell line CBA20110006;~~

~~(b) antibody having the binding characteristics of the antibody produced by hybridoma cell line CBA20110006; and~~

~~(c) antibody that binds to an antigen capable of binding the antibody produced by the hybridoma cell line CBA20110006.~~

~~14~~7. An isolated monoclonal antibody or a fragment thereof that is capable of specifically binding to at least one epitope of Enterovirus 71 (EV71) of sequence IGDSVS or GDSVSR, wherein the antibody is monoclonal antibody Mab4 produced by hybridoma cell line deposited with American Type Culture Collection (ATCC) with accession number CBA20110004.

~~15. The antibody according to claim 14, wherein the antibody has substantially the immunological binding characteristics of monoclonal antibody Mab4.~~

~~16. The antibody according to either claim 14 or 15, wherein the antibody is selected from the group consisting of:~~

~~(a) antibody produced by hybridoma cell line CBA20110004;~~

~~(b) antibody having the binding characteristics of the antibody produced by hybridoma cell line CBA20110004; and~~

~~(c) antibody that binds to an antigen capable of binding the antibody produced by the hybridoma cell line CBA20110004.~~

~~17~~8. The antibody according to any one of the preceding claims, wherein the antibody is at least one human, humanized or chimeric antibody.

~~18~~9. The antibody according to any one of the preceding claims, wherein EV71 is of genotype selected from the group consisting of A, B2, B4, B5, C1, C2, C4 and C5.

~~19~~10. The antibody according to any one of the preceding claims, wherein the antibody is labelled with at least one radionuclide and/or fluorochrome.

~~20~~11. The antibody according to any one of the preceding claims, wherein the antibody is linked with at least one drug, anti-viral drug, and/or toxin.

~~21~~12. An isolated hybridoma cell line deposited with American Type Culture Collection (ATCC) with accession number CBA20110004, CBA20110005, CBA20110006 and/or CBA20110007.

~~22~~13. A method of detecting and/or quantifying the presence and distribution of at least one EV71 infected cell in a subject, the method comprising:

a. contacting at least one antibody or fragment thereof according to any one of claims 1 to ~~20~~ 11 with at least one sample obtained from at least one subject; and

b. detecting and quantifying binding of the antibody to the EV71 infected cell.

2314. The method according to claim 2213, wherein the step of detecting comprises contacting the sample with a binding protein that contains or is conjugated to a detectable element.

2415. The method according to either claim 22 13 or 23 14 wherein the antibody is immobilized onto a solid surface.

2516. The method according to either claim 23 14 or 2415, wherein the binding protein contains a radioactive atom, is conjugated to a fluorescent molecule, or is conjugated to an enzyme.

2617. A kit for diagnosing EV71 and/or at least one EV71-linked disease, the kit comprising at least one antibody or a fragment thereof according to any one of claims 1 to 2011.

2718. The kit according to claim 2617, wherein the EV71-linked disease is at least one disease selected from the group consisting of aseptic meningitis, encephalitis, cranial nerve palsies, Guillan-Barre syndrome, poliomyelitis-like syndrome, and Hand, Foot and Mouth disease.

2819. A method of treatment and/or prevention of EV71 and/or at least one EV71-linked disease, the method comprising administering to a subject in need thereof at least one antibody or a fragment thereof according to any one of claims 1 to 2011.

2920. The method according to claim 2819, wherein the EV71-linked disease is at least one disease selected from the group consisting of aseptic meningitis, encephalitis, cranial nerve palsies, Guillan-Barre syndrome, poliomyelitis-like syndrome, and Hand, Foot and Mouth disease.

3021. An isolated antibody according to any one of claims 1 to 20 11 for use in medicine.

3122. An isolated antibody according to any one of claims 1 to 20 11 for use in treatment of and/or prevention of EV71 and/or at least one EV71-linked disease.

3223. Use of an isolated antibody according to any one of claims 1 to 20 11 for the preparation of a medicament for treatment of and/or prevention of EV71 and/or at least one EV71-linked disease.

3324. A pharmaceutical composition comprising the antibody of any one of the preceding claims 1 to 20 11 and a pharmaceutically acceptable carrier.