CLAIMS

1. An isolated anti-ceramide antibody or antigen-binding fragment thereof comprising a variable heavy chain (VH) and a variable light chain (VL), wherein:

the VH comprises a heavy chain variable region CDR1 comprising GYTFTDHTIH (SEQ ID NO: 1), a heavy chain variable region CDR2 comprising YNYPRDGSTKYNEKFKG (SEQ ID NO: 2), and a heavy chain variable region CDR3 comprising GFITTVVPSAY (SEQ ID NO: 3); and

the VL comprises a light chain variable region CDR1 comprising RASKSISKYLA (SEQ ID NO: 4), a light chain variable region CDR2 comprising SGSTLQS (SEQ ID NO: 5), and a light chain variable region CDR3 comprising QQHNEYPWT (SEQ ID NO: 6).

2. An isolated anti-ceramide antibody or antigen-binding fragment thereof comprising:

a heavy chain variable region sequence comprising QVQLQQSDAELVKPGASVKISCKVSGYTFTDHTIHWMKQRPEQGLEWIGYNYPRDGSTKYNEKFKGKATLTADKSSSTAYMQLNSLTSEDSAVYFCAKGFITTVVPSAYWGQGTLVTVSA (SEQ ID NO: 48); and

a light chain variable region sequence comprising DVQITQSPSYLAASPGETITINCRASKSISKYLAWYQEKPGKTNKLLIYSGSTLQSGIPSRFSGSGSGTDFTLTISSLEPEDFAMYYCQQHNEYPWTFGGGTKLEIK (SEQ ID NO: 8).

3. The anti-ceramide antibody or antigen-binding fragment of claim 1, wherein the antibody is selected from the group consisting of a monoclonal antibody, a chimeric antibody, a humanized antibody, a human antibody and a scFv.

4. The anti-ceramide antibody of claim 3, wherein the antibody is a scFv.

5. Use of the anti-ceramide antibody or antigen-binding fragment of any one of claims 1 to 4 in the manufacture of a medicament for inhibiting apoptosis in a subject in need thereof.

6. The use of claim 5, wherein the apoptosis is associated with a disease selected from the group consisting of graft versus host disease (GvHD), radiation disease, GI syndrome, and autoimmune disease.

7. The use of claim 6, wherein the disease is radiation disease or GI syndrome and the anti-ceramide antibody or antigen-binding fragment is to be administered before the subject is exposed to radiation.

8. The use of claim 6, wherein the disease is graft versus host disease and the anti-ceramide antibody or antigen-binding fragment is to be administered before the subject receives a transplant.

9. The use of claim 8, wherein the transplant is a bone marrow transplant.

10. The use of any one of claims 5 to 9, wherein the anti-ceramide antibody or antigen-binding fragment is to be administered intravenously, intramuscularly, intraperitoneally, intracerobrospinally, subcutaneously, intrasynovially, intrathecally, orally, topically, or *via* inhalation.

11. Use of the anti-ceramide antibody or antigen binding fragment of any one of claims 1 to 4 in the manufacture of a medicament for mitigating apoptosis in a subject with GI syndrome, wherein the medicament is to be administered to the subject after the subject is exposed to penetrating radiation.

12. The use of claim 11, wherein the anti-ceramide antibody or antigen binding fragment is to be administered immediately after the subject is exposed to penetrating radiation.

13. The use of claim 11, wherein the anti-ceramide antibody or antigen binding fragment is to be administered within 24 hours after the subject is exposed to penetrating radiation.

14. Use of the anti-ceramide antibody or antigen binding fragment of any one of claims 1 to 4 in the manufacture of a medicament for inhibiting apoptosis in a subject with GvHD, wherein the medicament is to be administered to the subject before the subject receives a transplant or after the subject receives a transplant prior to the onset of GvHD.

15. The use of claim 14, wherein the transplant is a bone marrow transplant.