CLAIMS

What is claimed:

1. A human hypo-immunogenic pluripotent (HIP) cell that (a) does not express β-2 microglobulin (B2M) protein, (b) does not express CIITA protein, and (c) expresses CD47, wherein the HIP cell further retains differentiation potential.

2. The HIP cell of claim 1, wherein the HIP cell shows increased expression of CD47 protein as a result of a modification to an endogenous CD47 gene locus.

3. The HIP cell of claim 1, wherein the increased expression of CD47 protein results from a CD47 transgene.

4. The HIP cell of any one of claims 1-3, wherein the CD47 protein has at least a 90% sequence identity to SEQ ID NO: 3.

5. The HIP cell of any one of claims 1-4, wherein the HIP cell does not express CIITA protein because a gene encoding the CIITA protein is knocked out.

6. The HIP cell of claim 5, wherein the CIITA protein has at least 90% sequence identity to SEQ ID NO: 2.

7. The HIP cell of any one of claims 1-6, wherein the HIP cell does not express B2M protein because a gene encoding the B2M protein is knocked out.

8. The HIP cell of claim 7, wherein the B2M protein has at least 90% sequence identity to SEQ ID NO: 1.

9. The HIP cell of any one of claims 1-8, wherein the HIP cell further comprises a suicide gene that is activated by a trigger that causes the HIP cell to die.

10. The HIP cell of claim 9, wherein the suicide gene is a herpes simplex virus thymidine kinase gene (HSV-tk) and the trigger is ganciclovir.

11. The HIP cell of claim 10, wherein the HSV-tk gene encodes a protein comprising the sequence of SEQ ID NO: 4.

12. The HIP cell of claim 9, wherein the suicide gene is an *Escherichia coli* cytosine deaminase gene (EC-CD) and the trigger is 5-fluorocytosine (5-FC).

13. The HIP cell of claim 12, wherein the EC-CD gene encodes a protein comprising the sequence of SEQ ID NO: 5.

14. The HIP cell of claim 9, wherein the suicide gene encodes an inducible Caspase protein and the trigger is a chemical inducer of dimerization (CID).

15. The HIP cell of claim 14, wherein the inducible Caspase protein comprises the sequence of SEQ ID NO: 6 and the CID is AP1903.