

CLAIMS

What is claimed is:

1. An inert matrix for an α -synuclein seed amplification assay, the matrix consisting essentially of:
 - (A) human serum albumin (HSA);
 - (B) aqueous NaCl; and
 - (C) (4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid) (HEPES),wherein the inert matrix is adapted to reflect absence of a misfolded protein in the α -synuclein seed amplification assay when used as a negative control, and to permit aggregation of a substrate with seeds in the α -synuclein seed amplification assay when used as a positive control.
2. The matrix of claim 1, wherein the HSA is present in a concentration of 1.5 mg/mL $\pm$ 10%.
3. The matrix of claim 1, wherein the HSA is present in a concentration of 15 mg/mL $\pm$ 10%.
4. The matrix of claim 1, wherein the HEPES is present in a concentration of 100 mM $\pm$ 10%.
5. The matrix of claim 1, wherein the HEPES maintains a pH of the matrix of 5-8 $\pm$ 10%.
6. The matrix of claim 1, wherein the aqueous NaCl is present in a concentration of 75 mM NaCl $\pm$ 10%.
7. The matrix of claim 1, the matrix consisting of:
 - (A) HSA;
 - (B) aqueous NaCl; and
 - (C) HEPES.
8. An inert matrix for an α -synuclein seed amplification assay, the matrix consisting essentially of:

- (A) human serum albumin (HSA);
- (B) aqueous NaCl;
- (C) (4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid) (HEPES); and
- (D) sarkosyl,

wherein the inert matrix is adapted to reflect absence of a misfolded protein in the α -synuclein seed amplification assay when used as a negative control, and to permit aggregation of a substrate with seeds in the α -synuclein seed amplification assay when used as a positive control.

- 9. The matrix of claim 8, wherein the HSA is present in a concentration of 1.5 mg/mL $\pm$ 10%.
- 10. The matrix of claim 8, wherein the HEPES is present in a concentration of 100 mM $\pm$ 10%.
- 11. The matrix of claim 8, wherein the HEPES maintains a pH of the matrix of 5-8 $\pm$ 10%.
- 12. The matrix of claim 8, wherein the aqueous NaCl has a concentration of 75 mM $\pm$ 10%.
- 13. The matrix of claim 8, wherein the sarkosyl is present in a concentration of 0.5% $\pm$ 10%.
- 14. The matrix of claim 8, the matrix consisting of:
 - (A) HSA;
 - (B) aqueous NaCl;
 - (C) HEPES; and
 - (D) sarkosyl.
- 15. The matrix of any one of the preceding claims, for use in the diagnosis of a synucleinopathy.
- 16. The matrix of any one of claims 1 to 14, used as a diluent in the α -synuclein seed amplification assay.