

Table S9: Top association signals from the Lewy body disease (LBD) ordinal II phenotype

| Marker      | Chr | Position    | EA | RA | Freq   | minFreq | maxFreq | Effect  | StdErr | Pval     | Direction | Gene              |
|-------------|-----|-------------|----|----|--------|---------|---------|---------|--------|----------|-----------|-------------------|
| rs429358    | 19  | 45,411,941  | C  | T  | 0.7347 | 0.6482  | 0.8712  | -0.508  | 0.0735 | 4.87E-12 | -----     | APOE,LOC100129500 |
| 4-185384861 | 4   | 185,384,861 | G  | A  | 0.9531 | 0.9439  | 0.9656  | -0.6523 | 0.1335 | 1.02E-06 | -----+    | IRF2              |
| rs6127813   | 20  | 55,255,054  | T  | C  | 0.2985 | 0.253   | 0.3032  | -0.2843 | 0.0594 | 1.70E-06 | -----     | none              |
| rs7132746   | 12  | 86,259,458  | C  | T  | 0.8751 | 0.8519  | 0.9048  | -0.3623 | 0.0769 | 2.47E-06 | ---++     | none              |
| rs7078209   | 10  | 124,860,026 | G  | T  | 0.6747 | 0.6455  | 0.7021  | 0.2772  | 0.0609 | 5.25E-06 | ++++++    | none              |
| rs12590995  | 14  | 44,682,864  | C  | A  | 0.9192 | 0.9131  | 0.9527  | -0.4532 | 0.0997 | 5.47E-06 | -----     | none              |
| rs727505    | 7   | 124,462,081 | A  | G  | 0.2875 | 0.2689  | 0.3287  | -0.2777 | 0.0612 | 5.70E-06 | -----     | none              |
| 2-228891013 | 2   | 228,891,013 | G  | A  | 0.9785 | 0.9696  | 0.9867  | -1.1721 | 0.2598 | 6.45E-06 | ----?-    | SPHKAP            |
| rs11739210  | 5   | 119,004,300 | C  | T  | 0.9824 | 0.9749  | 0.9869  | -1.1285 | 0.2533 | 8.40E-06 | +---?     | none              |
| rs1570582   | 9   | 85,910,512  | C  | A  | 0.9476 | 0.9259  | 0.9691  | -0.502  | 0.113  | 8.83E-06 | -----+    | FRMD3             |
| rs11024598  | 11  | 18,291,736  | G  | A  | 0.4741 | 0.4644  | 0.5181  | 0.2593  | 0.0585 | 9.31E-06 | ++++++    | none              |

Chr: chromosome number; EA: effect allele; RA: reference allele; Freq: frequency of effect allele; min/maxFreq: the minimum and maximum within cohort allele frequency; Effect: allele effect, in terms of the beta coefficient