

Supplementary **Table S1**.

Molecular interactions between studied gene – GeneMANIA prediction server (<http://genemania.org>)

| Gene 1 | Gene 2 | Interaction |
|---------------|---------------|----------------------|
| <i>Nefh</i> | <i>S100b</i> | Co-expression |
| <i>Rac1</i> | <i>S100a6</i> | Co-expression |
| <i>Nefh</i> | <i>S100b</i> | Co-expression |
| <i>Prdx5</i> | <i>Ak2</i> | Co-expression |
| <i>Tle1</i> | <i>S100b</i> | Co-expression |
| <i>S100a6</i> | <i>Sod1</i> | Co-expression |
| <i>Prdx5</i> | <i>Ak2</i> | Co-expression |
| <i>S100a1</i> | <i>Ager</i> | Co-expression |
| <i>Stk38</i> | <i>Tle1</i> | Co-expression |
| <i>Rac1</i> | <i>S100a6</i> | Co-expression |
| <i>Hmgb2</i> | <i>Cacybp</i> | Co-expression |
| <i>Sod3</i> | <i>Ager</i> | Co-expression |
| <i>Ak2</i> | <i>Ccs</i> | Co-expression |
| <i>S100a6</i> | <i>Ager</i> | Co-expression |
| <i>Tle5</i> | <i>Ager</i> | Co-expression |
| <i>Prkcz</i> | <i>Cd24a</i> | Co-expression |
| <i>S100a1</i> | <i>Prdx5</i> | Co-expression |
| <i>Prdx5</i> | <i>Sod1</i> | Co-expression |
| <i>S100a1</i> | <i>Tle5</i> | Co-expression |
| <i>Nefh</i> | <i>S100b</i> | Co-expression |
| <i>Prdx5</i> | <i>S100a6</i> | Co-expression |
| <i>Tle5</i> | <i>Ager</i> | Co-expression |
| <i>Hmgb2</i> | <i>Cd24a</i> | Co-expression |
| <i>Ak2</i> | <i>Ccs</i> | Co-expression |
| <i>P4hb</i> | <i>Ccs</i> | Co-expression |
| <i>P4hb</i> | <i>Ak2</i> | Co-expression |
| <i>Nefh</i> | <i>S100b</i> | Co-expression |
| <i>Tle5</i> | <i>Sod3</i> | Co-expression |
| <i>Nefh</i> | <i>Ager</i> | Co-expression |
| <i>Tle5</i> | <i>Rac1</i> | Co-expression |
| <i>S100a6</i> | <i>Sod1</i> | Co-expression |
| <i>Prdx5</i> | <i>Sod3</i> | Co-expression |
| <i>S100a6</i> | <i>Cd24a</i> | Co-localization |
| <i>Huwe1</i> | <i>Rac1</i> | Co-localization |
| <i>Nefh</i> | <i>S100b</i> | Co-localization |
| <i>Hmgb2</i> | <i>Hmgb1</i> | Co-localization |
| <i>Stk38</i> | <i>Cd24a</i> | Co-localization |
| <i>Tlr2</i> | <i>Sod3</i> | Co-localization |
| <i>S100a1</i> | <i>S100a6</i> | Co-localization |
| <i>Stk38</i> | <i>Rac1</i> | Co-localization |
| <i>Als2</i> | <i>Sod1</i> | Genetic Interactions |

| | | |
|----------------|---------------|-----------------------|
| <i>Prkcz</i> | <i>Cd24a</i> | Other |
| <i>Nefh</i> | <i>Sod1</i> | Other |
| <i>Cd24a</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Cd24a</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>S100a6</i> | <i>Cacybp</i> | Physical Interactions |
| <i>S100a7a</i> | <i>Ager</i> | Physical Interactions |
| <i>Ager</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Cacybp</i> | <i>S100b</i> | Physical Interactions |
| <i>S100a6</i> | <i>Cacybp</i> | Physical Interactions |
| <i>Prkcz</i> | <i>Ager</i> | Physical Interactions |
| <i>Rac1</i> | <i>Sod1</i> | Physical Interactions |
| <i>Tle1</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Prdx5</i> | <i>Sod1</i> | Physical Interactions |
| <i>Tlr2</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Tle5</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Huwe1</i> | <i>Sod1</i> | Physical Interactions |
| <i>Ccs</i> | <i>Sod1</i> | Physical Interactions |
| <i>Cacybp</i> | <i>S100b</i> | Physical Interactions |
| <i>S100a6</i> | <i>Cacybp</i> | Physical Interactions |
| <i>Tle5</i> | <i>Tle1</i> | Physical Interactions |
| <i>S100a1</i> | <i>Cacybp</i> | Physical Interactions |
| <i>Ccs</i> | <i>Sod1</i> | Physical Interactions |
| <i>Cacybp</i> | <i>S100b</i> | Physical Interactions |
| <i>S100a6</i> | <i>S100b</i> | Physical Interactions |
| <i>S100a6</i> | <i>Cacybp</i> | Physical Interactions |
| <i>Rac1</i> | <i>Sod1</i> | Physical Interactions |
| <i>S100a1</i> | <i>S100b</i> | Physical Interactions |
| <i>Hmgb2</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Ccs</i> | <i>Sod1</i> | Physical Interactions |
| <i>Cacybp</i> | <i>S100b</i> | Physical Interactions |
| <i>S100a6</i> | <i>Cacybp</i> | Physical Interactions |
| <i>Rac1</i> | <i>Sod1</i> | Physical Interactions |
| <i>Tlr2</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Ager</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>S100a6</i> | <i>Cacybp</i> | Physical Interactions |
| <i>Tle1</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Tle5</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Cacybp</i> | <i>S100b</i> | Physical Interactions |
| <i>S100a6</i> | <i>Cacybp</i> | Physical Interactions |
| <i>S100a1</i> | <i>Cacybp</i> | Physical Interactions |
| <i>Tle1</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Tle5</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Ager</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>S100a6</i> | <i>Cacybp</i> | Physical Interactions |
| <i>Tle1</i> | <i>Hmgb1</i> | Physical Interactions |

| | | |
|---------------|---------------|-----------------------|
| <i>Tle5</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Ager</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Cacybp</i> | <i>S100b</i> | Physical Interactions |
| <i>S100a6</i> | <i>Cacybp</i> | Physical Interactions |
| <i>Prkcz</i> | <i>Ager</i> | Physical Interactions |
| <i>Rac1</i> | <i>Sod1</i> | Physical Interactions |
| <i>Tle1</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Prdx5</i> | <i>Sod1</i> | Physical Interactions |
| <i>Tlr2</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Tle5</i> | <i>Hmgb1</i> | Physical Interactions |
| <i>Huwe1</i> | <i>Sod1</i> | Physical Interactions |
| <i>S100b</i> | <i>Ager</i> | Predicted |
| <i>Cacybp</i> | <i>Ager</i> | Predicted |
| <i>S100a6</i> | <i>Ager</i> | Predicted |
| <i>S100a6</i> | <i>Cacybp</i> | Predicted |
| <i>Ak2</i> | <i>Sod1</i> | Predicted |
| <i>Ak2</i> | <i>Ccs</i> | Predicted |
| <i>Prkcz</i> | <i>P4hb</i> | Predicted |
| <i>Rac1</i> | <i>S100b</i> | Predicted |
| <i>Rac1</i> | <i>Prkcz</i> | Predicted |
| <i>Tlr2</i> | <i>Prkcz</i> | Predicted |
| <i>Tle5</i> | <i>Tle1</i> | Predicted |
| <i>S100a1</i> | <i>Ager</i> | Predicted |
| <i>S100a1</i> | <i>S100b</i> | Predicted |
| <i>S100a1</i> | <i>Cacybp</i> | Predicted |
| <i>S100a1</i> | <i>S100a6</i> | Predicted |
| <i>Hmgb2</i> | <i>Hmgb1</i> | Predicted |
| <i>Stk38</i> | <i>Ager</i> | Predicted |
| <i>Stk38</i> | <i>Cacybp</i> | Predicted |
| <i>Stk38</i> | <i>S100a6</i> | Predicted |
| <i>Stk38</i> | <i>S100a1</i> | Predicted |
| <i>S100b</i> | <i>Ager</i> | Predicted |
| <i>Ccs</i> | <i>Sod1</i> | Predicted |
| <i>Sod3</i> | <i>Sod1</i> | Predicted |
| <i>Sod3</i> | <i>Ccs</i> | Predicted |
| <i>S100a6</i> | <i>S100b</i> | Predicted |
| <i>Ak2</i> | <i>Sod1</i> | Predicted |
| <i>Tle5</i> | <i>Tle1</i> | Predicted |
| <i>S100a1</i> | <i>Ager</i> | Predicted |
| <i>S100a1</i> | <i>S100b</i> | Predicted |
| <i>S100a1</i> | <i>S100a6</i> | Predicted |
| <i>Hmgb2</i> | <i>Hmgb1</i> | Predicted |
| <i>Stk38</i> | <i>Prkcz</i> | Predicted |
| <i>Ccs</i> | <i>Sod1</i> | Predicted |
| <i>Ak2</i> | <i>Sod1</i> | Predicted |

| | | |
|---------------|---------------|-----------|
| <i>Nefh</i> | <i>Ccs</i> | Predicted |
| <i>P4hb</i> | <i>Sod1</i> | Predicted |
| <i>Rac1</i> | <i>Prkcz</i> | Predicted |
| <i>Ccs</i> | <i>Sod1</i> | Predicted |
| <i>S100a6</i> | <i>S100b</i> | Predicted |
| <i>Ccs</i> | <i>Sod1</i> | Predicted |
| <i>S100a6</i> | <i>S100b</i> | Predicted |
| <i>S100a6</i> | <i>Cacybp</i> | Predicted |
| <i>Prdx5</i> | <i>Sod1</i> | Predicted |
| <i>Tle5</i> | <i>Tle1</i> | Predicted |
| <i>Huwe1</i> | <i>Ak2</i> | Predicted |
| <i>Stk38</i> | <i>S100b</i> | Predicted |
| <i>Ccs</i> | <i>Sod1</i> | Predicted |
| <i>Cacybp</i> | <i>S100b</i> | Predicted |
| <i>S100a6</i> | <i>S100b</i> | Predicted |
| <i>S100a6</i> | <i>Cacybp</i> | Predicted |
| <i>Stk38</i> | <i>S100b</i> | Predicted |
| <i>Ager</i> | <i>Hmgb1</i> | Predicted |
| <i>S100b</i> | <i>Ager</i> | Predicted |
| <i>Ccs</i> | <i>Sod1</i> | Predicted |
| <i>Cacybp</i> | <i>S100b</i> | Predicted |
| <i>S100a6</i> | <i>S100b</i> | Predicted |
| <i>S100a6</i> | <i>Cacybp</i> | Predicted |
| <i>Ak2</i> | <i>Sod1</i> | Predicted |
| <i>Prkcz</i> | <i>Cd24a</i> | Predicted |
| <i>Rac1</i> | <i>Cd24a</i> | Predicted |
| <i>Rac1</i> | <i>Prkcz</i> | Predicted |
| <i>Tle1</i> | <i>Hmgb1</i> | Predicted |
| <i>Prdx5</i> | <i>Sod1</i> | Predicted |
| <i>Tlr2</i> | <i>Cd24a</i> | Predicted |
| <i>Tlr2</i> | <i>Sod3</i> | Predicted |
| <i>Tlr2</i> | <i>Prkcz</i> | Predicted |
| <i>Tle5</i> | <i>Hmgb1</i> | Predicted |
| <i>Tle5</i> | <i>Rac1</i> | Predicted |
| <i>Tle5</i> | <i>Tlr2</i> | Predicted |
| <i>S100a1</i> | <i>Ager</i> | Predicted |
| <i>S100a1</i> | <i>S100b</i> | Predicted |
| <i>S100a1</i> | <i>Sod3</i> | Predicted |
| <i>S100a1</i> | <i>S100a6</i> | Predicted |
| <i>S100a1</i> | <i>Tlr2</i> | Predicted |
| <i>Hmgb2</i> | <i>Hmgb1</i> | Predicted |
| <i>Stk38</i> | <i>S100b</i> | Predicted |
| <i>Nefh</i> | <i>Sod1</i> | Predicted |
| <i>Ccs</i> | <i>Sod1</i> | Predicted |
| <i>P4hb</i> | <i>Sod1</i> | Predicted |

| | | |
|----------------|----------------|------------------------|
| <i>S100a6</i> | <i>S100b</i> | Predicted |
| <i>Rac1</i> | <i>Sod1</i> | Predicted |
| <i>Rac1</i> | <i>Als2</i> | Predicted |
| <i>Tle5</i> | <i>Tle1</i> | Predicted |
| <i>Ccs</i> | <i>Sod1</i> | Predicted |
| <i>Ccs</i> | <i>Sod1</i> | Predicted |
| <i>Rac1</i> | <i>Als2</i> | Predicted |
| <i>Ccs</i> | <i>Sod1</i> | Shared protein domains |
| <i>Sod3</i> | <i>Sod1</i> | Shared protein domains |
| <i>Sod3</i> | <i>Ccs</i> | Shared protein domains |
| <i>S100a6</i> | <i>S100b</i> | Shared protein domains |
| <i>S100a7a</i> | <i>S100b</i> | Shared protein domains |
| <i>S100a7a</i> | <i>S100a6</i> | Shared protein domains |
| <i>Prdx5</i> | <i>P4hb</i> | Shared protein domains |
| <i>Tle5</i> | <i>Tle1</i> | Shared protein domains |
| <i>S100a1</i> | <i>S100b</i> | Shared protein domains |
| <i>S100a1</i> | <i>S100a6</i> | Shared protein domains |
| <i>S100a1</i> | <i>S100a7a</i> | Shared protein domains |
| <i>Hmgb2</i> | <i>Hmgb1</i> | Shared protein domains |
| <i>Stk38</i> | <i>Prkcz</i> | Shared protein domains |
| <i>Ccs</i> | <i>Sod1</i> | Shared protein domains |
| <i>Sod3</i> | <i>Sod1</i> | Shared protein domains |
| <i>Sod3</i> | <i>Ccs</i> | Shared protein domains |
| <i>S100a6</i> | <i>S100b</i> | Shared protein domains |
| <i>S100a7a</i> | <i>S100b</i> | Shared protein domains |
| <i>S100a7a</i> | <i>S100a6</i> | Shared protein domains |
| <i>Tle5</i> | <i>Tle1</i> | Shared protein domains |
| <i>S100a1</i> | <i>S100b</i> | Shared protein domains |
| <i>S100a1</i> | <i>S100a6</i> | Shared protein domains |
| <i>S100a1</i> | <i>S100a7a</i> | Shared protein domains |
| <i>Hmgb2</i> | <i>Hmgb1</i> | Shared protein domains |
| <i>Stk38</i> | <i>Prkcz</i> | Shared protein domains |

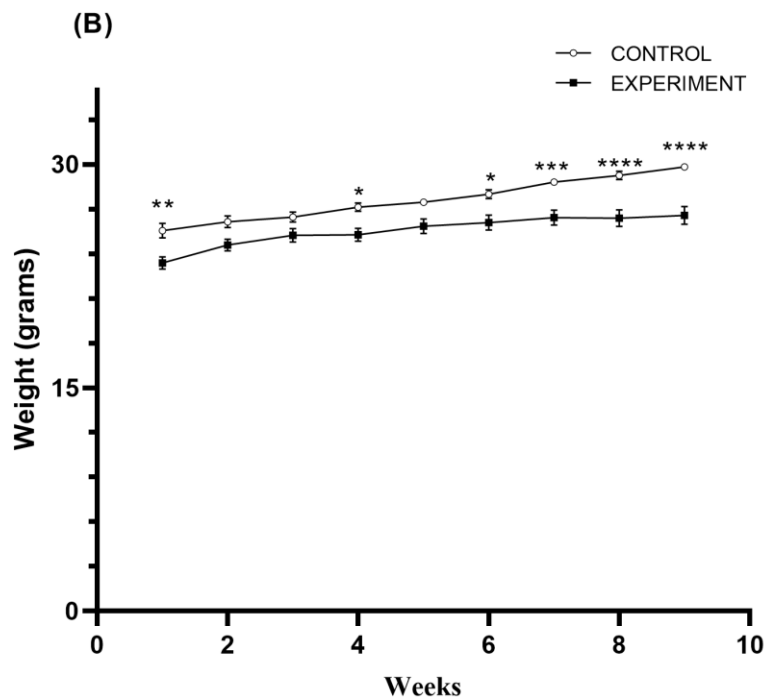
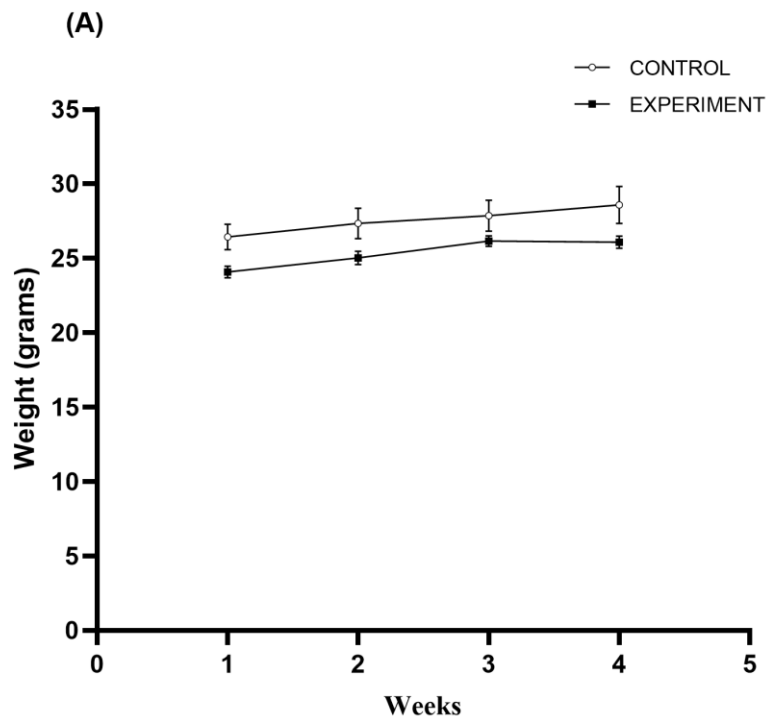


Figure S1 A-B Body mass changes over the course of the disease between ALS and control mice at 90 time point (A) and 120 time point (B). All mice were weighted three times a week beginning at eight weeks of age. The arithmetic weekly mean was taken from three weekly measurements; n=7 in both groups.