**Supplemental information**

**Differential brain and cerebrospinal fluid proteomic responses to acute prenatal endotoxin exposure**

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**Supplementary Table S1:** List of primers used in qPCR

**Supplementary Table S2:** Proteomic differences in CSF on Day 1

**Supplementary Table S3:** Proteomic differences in exposure proteins in CSF on Day 1

**Supplementary Table S4:** Proteomic differences in the hippocampus on Day 5

**Supplementary Table S1:** List of primers used in qPCR

|  |  |  |  |
| --- | --- | --- | --- |
| **Symbol** | **Name** | **Primer sequences** | |
| Forward | Reverse |
| BASP1 | Brain Abundant Membrane Attached Signal Protein 1 | GCAAGCAGGAAACCCCAAAG | CTGCCTCCTTGCTCTTGTCA |
| C3 | Complement C3 | ATCAAATCAGGCTCCGATGA | GGGCTTCTCTGCATTTGATG |
| FGFR1 | Fibroblast Growth Factor Receptor 1 | CAGCATCAACCACACCTAC | CCAATCTTACTCCCATTCACC |
| HIF1A | Hypoxia Inducible Factor 1 Subunit Alpha | TGTGTTATCTGTCGCTTTGAGTC | TTTCGCTTTCTCTGAGCATTC |
| HPRT1 | Hypoxanthine-guanine  phosphoribosyltransferase (REF) | ACACTGGCAAAACAATGCAA | TGCAACCTTGACCATCTTTG |
| LBP | Lipopolysaccharide Binding Protein | CCCAAGGTCAATGATAAGTTGG | ATCTGGAGAACAGGGTCGTG |
| MINPP1 | Multiple Inositol-Polyphosphate Phosphatase 1 | CTTCAGGGTTCGCGTAGCAC | ATTTGTTTGGCCGTCGGGTA |
| S100A9 | S100 Calcium Binding Protein A9 | GCCAAACTTTCTCAAGAAGCA | AGTGTCCAGGTCTTCCAGGAT |

**Supplementary Table S2:** Proteomic differences in CSF on Day 1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **UniProt ID** | **Gene** | **Protein** | **Abundance1 by treatment** | | **Adjusted P value2** |
| **Control** | **LPS** |
| F1SCC6\_PIG | LOC100153899 | SERPIN domain-containing protein | 11.75±0.63 | 18.24±0.62 | 0.00 |
| CO3\_PIG | C3 | Complement C3 | 22.68±0.12 | 23.5±0.12 | 0.03 |
| F1SCV9\_PIG | LOC100519252 | APOB | 20.5±0.16 | 21.26±0.09 | 0.04 |
| PLMN\_PIG | PLG | Plasminogen | 19.29±0.15 | 20.14±0.14 | 0.04 |
| CFAB\_PIG; | BF;CFB | Complement factor B | 20.99±0.24 | 21.81±0.04 | 0.05 |
| F1RMN7\_PIG | HPX | Hemopexin | 16.09±0.41 | 18.36±0.39 | 0.05 |
| F1SH96\_PIG | ITIH1 | Inter-alpha-trypsin inhibitor heavy chain H1 | 20.64±0.16 | 21.13±0.08 | 0.10 |
| F1RZJ8\_PIG | FGFR1 | Fibroblast growth factor receptor 1 | 15.17±0.19 | 14.19±0.16 | 0.05 |
| I3L661\_PIG | BASP1 | Brain acid soluble protein 1 | 15.87±0.21 | 14.92±0.17 | 0.08 |

1. The linear mixed models take treatment, sex and litter as explanatory variables, litter explaining random effects.

2. Mean ± SEM.

**Supplementary Table S3:** Proteomic differences in exposure proteins in CSF on Day 1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **UniProt ID** | **Gene** | **Protein** | **Detected among samples1 (%)** | | **P value** |
| **Control** | **LPS** |
| ACY1\_PIG | ACY1 | Aminoacylase 1 | 20 | 100 | 0.010 |
| F1SFZ8\_PIG | TLN1 | Talin 1 | 20 | 85.71428571 | 0.045 |
| D0G0C7\_PIG;I3L7P7\_PIG | ATOX1 | Antioxidant Protein 1 | 20 | 85.71428571 | 0.045 |
| E0Y441\_PIG | VIP | Vasoactive Intestinal Peptide | 80 | 14.28571429 | 0.029 |
| F1SJ93\_PIG | RCN2 | Reticulocalbin 2 | 20 | 85.71428571 | 0.045 |
| F1SMZ7\_PIG | HSPD1 | Heat Shock Protein Family D (Hsp60) Member 1 | 20 | 85.71428571 | 0.045 |
| F1SQ14\_PIG | UBE2N | Ubiquitin Conjugating Enzyme E2 N | 20 | 85.71428571 | 0.045 |
| I3LF89\_PIG | CPN2 | Carboxypeptidase N Subunit 2 | 100 | 14.28571429 | 0.009 |

1. Percentage of detected protein among samples compared to total sample count in each treatment group.

**Supplementary Table S4:** Proteomic differences in the hippocampus on Day 5

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **UniProt ID** | **Gene** | **Protein** | **Abundance1 by treatment** | | **Fold change** | **Adjusted P value** |
| **Control** | **LPS** |
| **Proteomics difference selected by fold change2** | | | | | | |
| F1S9I0\_PIG | MIA3 | Melanoma inhibitor protein 3 | 91706.88±7891.44 | 510065.06±187378.11 | 5.56 | 0.26 |
| C3VMK7\_PIG | CLDN11 | Claudin 11 | 86804.74±42358.95 | 264686.14±69644.25 | 3.05 | 0.25 |
| F1RF33\_PIG | PLLP | Plasmolipin | 125604.58±77436.78 | 382611.51±120738.54 | 3.05 | 0.26 |
| **Proteomics difference selected by adjusted p value3** | | | | | | |
| I3LP72\_PIG | ELN | Elastin | 16.09±0.12 | 15.02±0.13 | 1.06 | 0.03 |
| F1SCZ6\_PIG | MINPP1 | multiple inositol polyphosphate phosphatase 1 | 14.13±0.04 | 13.27±0.18 | 0.94 | 0.07 |
| F1SGF0\_PIG | PRICKLE2 | prickle homolog 2 | 14.13±0.48 | 15.1±0.21 | 0.93 | 0.09 |

1 Mean ± SEM.

2. Fold change calculated with raw data without log2 transform and displayed as raw mean ± SEM.

3. The linear mixed models take treatment, sex and litter as explanatory variables, litter explaining random effects.