**4,4’-Methylene Diphenyl Diisocyanate Exposure Induces Expression of Alternatively Activated Macrophage-Associated Markers and Chemokines Partially Through Krüppel-Like Factor 4 Mediated Signaling in Macrophages**

Data Dictionary

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| **Field Name** | **Field Contents** |
| BALC | Cells from Bronchoalveolar Lavage of mouse lungs |
| *Ccl17* | Mouse C-C Motif Chemokine Ligand 17 mRNA; a member of chemokines involved in immunoregulatory and inflammatory processes |
| *CCL17* | Human C-C Motif Chemokine Ligand 17 mRNA; a member of chemokines involved in immunoregulatory and inflammatory processes |
| CCL17 | Human C-C Motif Chemokine Ligand 17 protein; a member of chemokines involved in immunoregulatory and inflammatory processes |
| *Ccl22* | Mouse C-C Motif Chemokine Ligand 22 mRNA; a member of chemokines involved in immunoregulatory and inflammatory processes |
| *CCL22* | Human C-C Motif Chemokine Ligand 22 mRNA; a member of chemokines involved in immunoregulatory and inflammatory processes |
| CCL22 | Human C-C Motif Chemokine Ligand 22 protein; a member of chemokines involved in immunoregulatory and inflammatory processes |
| *Ccl24* | Mouse C-C Motif Chemokine Ligand 24 mRNA; a member of chemokines involved in immunoregulatory and inflammatory processes |
| *CCL24* | Human C-C Motif Chemokine Ligand 24 mRNA; a member of chemokines involved in immunoregulatory and inflammatory processes |
| CCL24 | Human C-C Motif Chemokine Ligand 24 protein; a member of chemokines involved in immunoregulatory and inflammatory processes |
| *Cd206* | Mouse Mannose Receptor C-Type 1 mRNA; a cell surface marker for M2 macrophages which recognizes and binds high-mannose structures on the surface of potentially pathogenic viruses, bacteria, and fungi |
| *CD206* | Human Mannose Receptor C-Type 1 mRNA; a cell surface marker for M2 macrophages which recognizes and binds high-mannose structures on the surface of potentially pathogenic viruses, bacteria, and fungi |
| *Cd273* | Mouse Programmed cell death 1 ligand 2 mRNA; cell surface receptor belonging to the B7 protein family; a newly identified M2 macrophage marker |
| *Cebpb* | Mouse CCAAT Enhancer Binding Protein Beta mRNA; a transcription factor contains a basic leucine zipper (bZIP) domain, and it regulates genes involved in immune and inflammatory responses |
| *CEBPPB* | Human CCAAT Enhancer Binding Protein Beta mRNA; a transcription factor contains a basic leucine zipper (bZIP) domain, and it regulates genes involved in immune and inflammatory responses |
| *Chil3* | Mouse chitinase-like 3 mRNA; a murine M2 macrophage marker which degrades chitin found on fungi cell wall |
| *Chil4* | Mouse chitinase-like 4 mRNA; a murine M2 macrophage marker which degrades chitin found on fungi cell wall |
| *Clec10a* | Mouse C-type lectin domain family 10 member A mRNA; a member of the C-type lectin superfamily and binds to N-Acetylgalactosamine (GalNAc) |
| *Clec7a* | Mouse C-type lectin domain family 7 member A mRNA; a member of the C-type lectin/C-type lectin-like domain (CTL/CTLD) superfamily |
| Concentration (pg/ml) | Secreted protein concentration in picogram per ml measured by ELISA in conditioned media collected from treated THP-1 macrophages |
| D-/MDI- | BALB/c mice with neither MDI dermal exposure nor MDI inhalation |
| D+/M- | BALB/c mice with MDI dermal exposure at days 1, 2, 3, 14, 15, 16 followed by 1 h house-air inhalation at day 21 |
| D+/M+24h | BALCs collected 24h after animal subjected to 1h MDI inhalation at day 21 with prior MDI dermal exposure at days 1, 2, 3, 14, 15, 16. |
| ELISA | Enzyme-linked, immunosorbent assay |
| Fold change | Fold change in gene expression compared to control. Determined by real-time PCR. |
| GSH | Reduced glutathione; antioxidant in biological system to reduce oxidative stress from reactive oxygen species |
| *Irf4* | Mouse Interferon Regulatory Factor 4 mRNA; a member of IRF (interferon regulatory factor) family of transcription factors involved in regulation of interferons in response to infection by virus and immune responses |
| *IRF4* | Human Interferon Regulatory Factor 4 mRNA; a member of IRF (interferon regulatory factor) family of transcription factors involved in regulation of interferons in response to infection by virus and immune responses |
| *Klf4* | Mouse Krüppel-like factor 4 mRNA; a member of Krüppel-like transcription factors involved in stem cell, cell differentiation, immunoregulatory processes |
| *KLF4* | Human Krüppel-like factor 4 mRNA; a member of Krüppel-like transcription factors involved in stem cell, cell differentiation, immunoregulatory processes |
| MDI | 4,4’-methylene diphenyl diisocyanate; reactive chemical that is used for polyurethan production; cause agent for occupational asthma |
| Mock | Treatments containing only complete media (RPMI-1640 supplement with 10% Fetal Bovine Serum, and 1× penicillin-streptomycin-glutamine) |
| pCMV6-Entry | Empty plasmid DNA vector containing Human cytomegalovirus immediate-early (CMV) promoter as control. |
| pCMV6-Entry-KLF4 | Plasmid DNA containing CMV promoter for high-level expression of KLF4 gene in mammalian cells |
| Plasmid transfected | Indicated the cells was transfected with the plasmid DNA |
| *Pparg* | Mouse Peroxisome Proliferator Activated Receptor Gamma mRNA; a member of the peroxisome proliferator-activated receptor (PPAR) subfamily of nuclear receptors involved in immunoregulatory and inflammatory processes |
| *PPARG* | Human Peroxisome Proliferator Activated Receptor Gamma mRNA; a member of the peroxisome proliferator-activated receptor (PPAR) subfamily of nuclear receptors involved in immunoregulatory and inflammatory processes |
| *Rentlb* | Mouse Resistin Like Beta mRNA; a murine M2 macrophage marker which was predicted to enable hormone activity and involve epithelial cell proliferation |
| siRNA transfected | Indicated the cells was transfected with the siRNA |
| siRNA-Ctl | nontargeting siRNA control; Thermo Fisher Scientific Cat#4390843 |
| siRNA-KLF4-793 | siRNAs specific target to the coding region of human KLF4 transcripts; Thermo Fisher Scientific Cat#4392420; Assay ID#s17793 |
| siRNA-KLF4-794 | siRNAs specific target to the coding region of human KLF4 transcripts; Thermo Fisher Scientific Cat#4392420; Assay ID#s17794 |
| *Spi1* | Mouse Spi-1 Proto-Oncogene mRNA; an ETS-domain transcription factor that activates gene expression during myeloid and B-lymphoid cell development |
| *SPI1* | Human Spi-1 Proto-Oncogene mRNA; an ETS-domain transcription factor that activates gene expression during myeloid and B-lymphoid cell development |
| *Stat6* | Mouse Signal Transducer and Activator of Transcription 6 mRNA; a member of the STAT family of transcription factors involved in exerting IL4 mediated immunoregulatory responses of different immune cells |
| *STAT6* | Human Signal Transducer and Activator of Transcription 6 mRNA; a member of the STAT family of transcription factors involved in exerting IL4 mediated immunoregulatory responses of different immune cells |
| % migration | Percentage migration of differentiated immune cells into the lower chamber after 6 hours incubation time |
| TF | Transcription factor |
| *Tgm2* | Mouse Transglutaminase 2 mRNA; a M2 macrophage marker; belongs to transglutaminases protein family which are enzymes that catalyze the crosslinking of proteins by epsilon-gamma glutamyl lysine isopeptide bonds |
| *TGM2* | Human Transglutaminase 2 mRNA; a M2 macrophage marker; belongs to transglutaminases protein family which are are enzymes that catalyze the crosslinking of proteins by epsilon-gamma glutamyl lysine isopeptide bonds |