

Table S1. Gene analysis

| A Regulated genes from <i>ADAM10^{Flox/Flox} Cre</i> mice known to be involved in lipid metabolism | |
|---------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Gene name | Fold change in gene expression |
| Aldo-ketoreductase family 1, member D1 | -3.98 |
| Carbonic anhydrase 6 | -3.73 |
| Arachidonate 12-lipoxygenase | -3.61 |
| Butyrobetaine (gamma), 2-oxoglutarate dioxygenase 1 | -3.39 |
| Stearoyl-Coenzyme A desaturase 1 | -2.39 |
| Enoyl Coenzyme A hydratase domain containing 1 | -2.39 |
| Arachidonate lipoxygenase, epidermal | -2.32 |
| STAR-related lipid transfer (START) domain containing 5 | -2.29 |
| Stearoyl-Coenzyme A desaturase 2 | -2.27 |
| Acyl-CoA synthetase long-chain family member 4 | -2.18 |
| Short chain dehydrogenase | -2.17 |
| Alkaline ceramidase 1 | -2.05 |
| Acyl-Coenzyme A dehydrogenase family, member 9 | -1.88 |
| Fatty acid binding protein 5, epidermal | -1.63 |
| Alkaline ceramidase 2 | -1.62 |
| Fattyacidbindingprotein 5, epidermal | -1.6 |
| B Regulated genes from <i>ADAM10^{Flox/Flox} Cre</i> mice known to be involved in retinol metabolism | |
| Gene name | Fold change in gene expression |
| Aldehyde dehydrogenase family 1, subfamily A7 | -7.73 |
| Lysozyme 2 | -4.61 |
| Abhydrolase domain containing 14b | -4.19 |
| Arachidonate 12-lipoxygenase | -3.61 |
| Glycine amidinotransferase | -3.14 |
| Cytochrome b5 reductase 4 | -2.58 |
| Cytochrome b5 reductase 4 | -2.5 |
| Retinol dehydrogenase 12 | -2.36 |
| Alcohol dehydrogenase 1 (class I) | -2.32 |
| Lysosomal-associated protein transmembrane 5 | -2.18 |
| Acyl-CoA synthetase long-chain family member 1 | -2.02 |
| Cytochrome P450, family 2, subfamily s, polypeptide 1 | -1.99 |
| Short chain dehydrogenase | -1.88 |
| Aldehyde dehydrogenase 3 family, member B2 | -1.63 |
| Retinol binding protein 2, cellular | -1.55 |