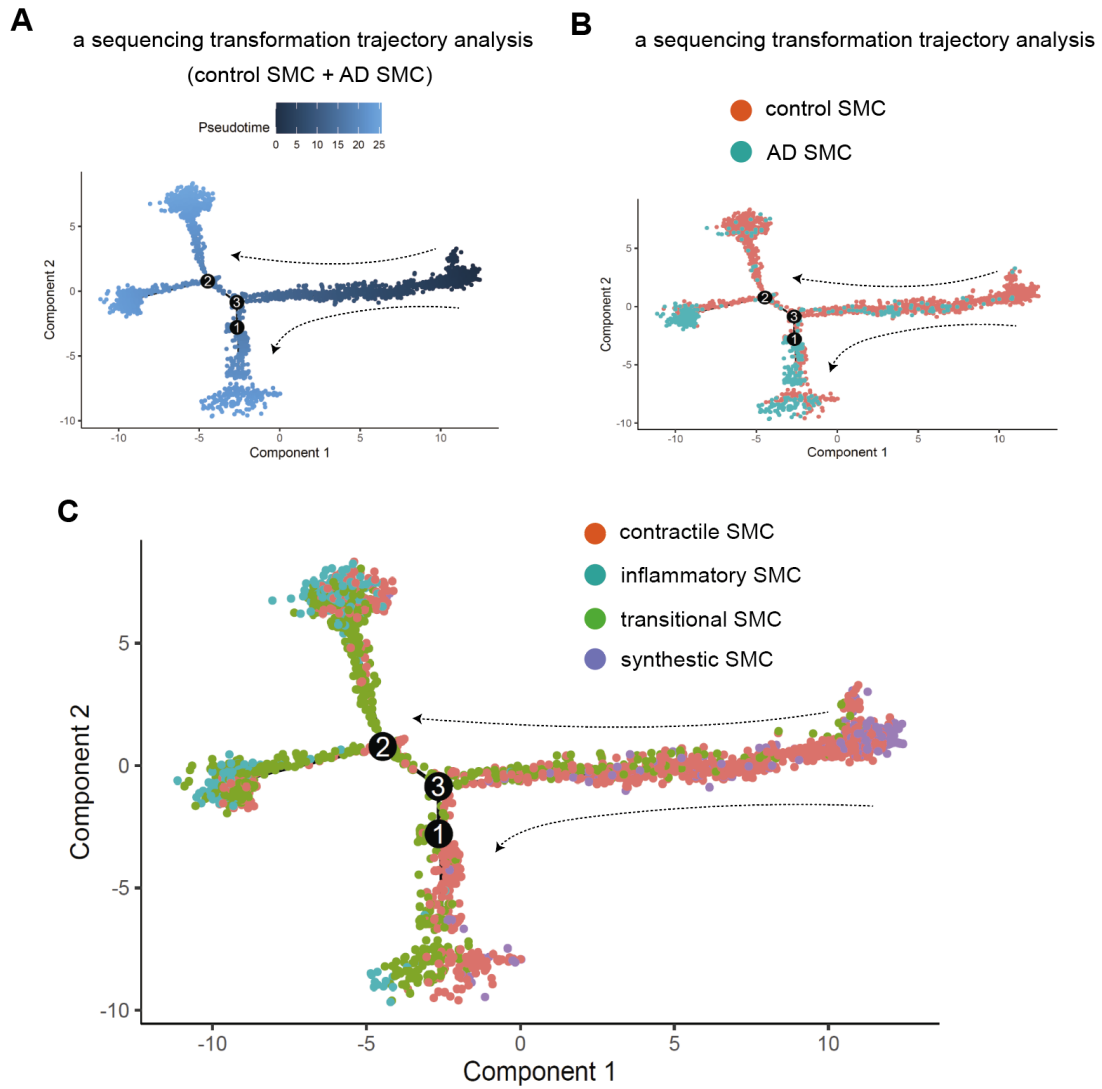


Supplemental Figure 1 Subcellular reclustering and signaling pathway enrichment analysis of CD4⁺ immune T cells

- (A) The expression level of CD4⁺ T cells.
- (B) Gene ontology (GO) analysis indicated significant enrichment processes.
- (C) The expression of typical CD4⁺ T cell markers.
- (D) The expression of myeloid cell markers, such as those associated with Dendritic Cells (pDCs).



Supplemental Figure 2 Sequencing transformation trajectory analysis of SMC

(A) Sequencing transformation trajectory analysis of control-SMC and AD-SMC.

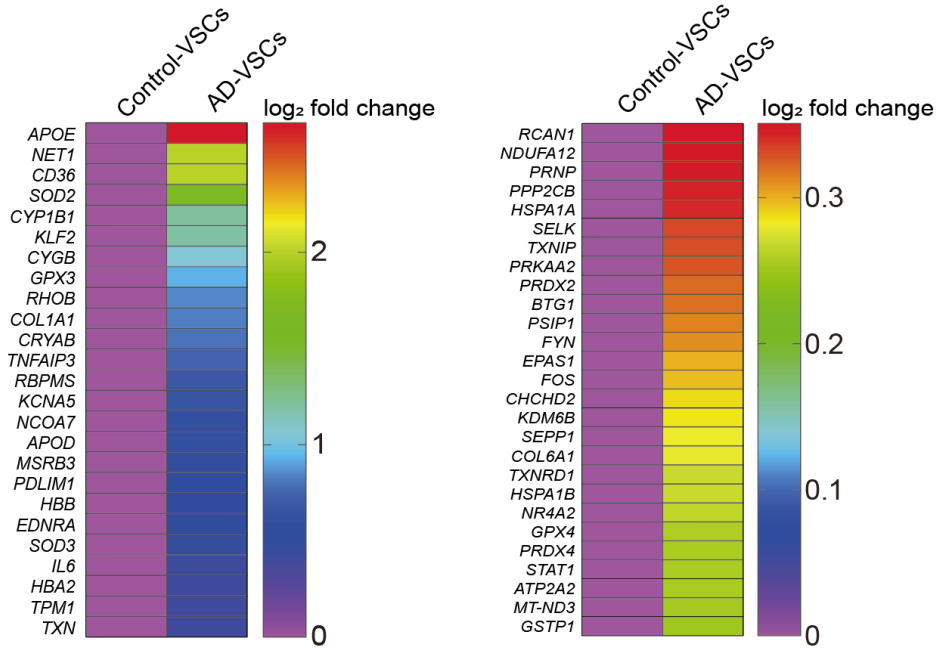
(B) The differences in cell transformation between AD-SMC and control-SMC.

(C) Detailed analysis based on gene expression profiles of different type of SMC.

GO biological process complete

events	P value	FDR
response to oxidative stress	2.20E-05	4.93E-04
detoxification of inorganic compound	3.34E-04	5.52E-03
detoxification	7.08E-04	1.05E-02
positive regulation of T cell mediated cytotoxicity	4.43E-03	4.68E-02

response to oxidative stress



Supplemental Figure 3 The heat map of the expression levels of genes involved in oxidative stress events in AD