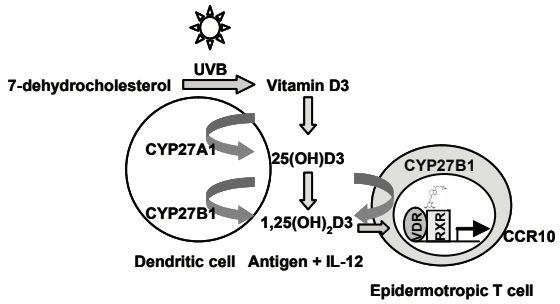
UVB
7-dehydrocholesterol
Vitamin D3
CYP27A1
25(OH)D3
CYP27B1
1,25(OH)2D3
CYP27B1
VDR
RXR
CCR10
Dendritic cell
Antigen + IL-12
Epidermotropic T cell

Supplemental Figure 4. Schematic summary of the proposed role of sunlight, vitamin D and dendritic cells in the induction of CCR10 on T cells. Sunlight generates vitamin D_3 locally in the skin, thereby inducing T cell CCR10 expression and epidermotropism through a cascade of enzymatic reactions mediated by antigen-presenting DCs and activated T cells themselves, leading to transcription of the *CCR10* gene in response to liganded VDR. DCs express the cytochrome p450 enzyme CYP27A1, which can catalyze the 25-hydroxylation of D_3. DCs and T cells each express the 1-hydroxylase CYP27B1 and can convert $25(OH)D_3$ to the active $1,25(OH)_2D_3$.