list_update[0,22]

$l[i:=x] \equiv_{\text{def}} \text{mklist}(\|l\|;\lambda i.l[i][i:=x])$

clarification:

$l[i:=x] \equiv_{\text{def}} \text{mklist}(\|l\|;\text{update}(\lambda i,j.\ i=_2 j;\lambda i.l[i];i;x))$

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http://www.cs.cornell.edu/Info/Projects/NuPrl/FDLcontent/p0_286125_/p30_241779_{list_update}.html