library(pheatmap)

p1=plasma

pheatmap(p,scale = 'row',treeheight\_row = 30, treeheight\_col = 50,border=FALSE,clustering\_method = 'average',cluster\_cols = FALSE)

bk = unique (c(seq(-2,2, length=100)))

annotation\_col = data.frame(Group = factor(rep(c("SC","CLP", "CLP\_ADMSCs"), c(6, 6,6))))

row.names(annotation\_col)=colnames(p1)

ann\_colors = list (Group = c(SC="#3DB87B",CLP ="#ff3030" , CLP\_ADMSCs ="#3399FF"))

hm = pheatmap(p1,breaks = bk,show\_rownames = T,show\_colnames = F,cluster\_rows =T,

scale = 'row',color = colorRampPalette(c("#00628B", "#FFFFFF", "#FF0000"))(100),

annotation\_col = annotation\_col,fontsize =12,font=2,annotation\_colors = ann\_colors,

cellheight = 18, cellwidth = 8, clustering\_distance\_cols = "euclidean",kmeans\_k = NA,

clustering\_distance\_rows = "euclidean", clustering\_method ='ward.D',

treeheight\_row = 30, treeheight\_col = 40, fontsize\_row = 12, fontsize\_col = 5,

border=FALSE,cluster\_col=F,filename = 'xxx.tiff',cex=1)

dev.new()

hm