

PC_selection

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1 optimal number of PCs

```
[ ]: PC_selection <- function(seurat.pca){
  pct <- seurat.pca[["pca"]][@stdev/sum(seurat.pca[["pca"]][@stdev])*100
  cumu <- cumsum(pct)
  co1 <- which(cumu>90 & pct < 5)[1]
  co2 <- sort(which((pct[1:length(pct) - 1] - pct[2:length(pct)]) > 0.1),
  ↪decreasing = T)[1]+1
  pcs <- min(co1, co2) ## PC

  view <- data.frame(pct = pct, cumu = cumu, rank = 1:length(pct))
  p <- ggplot(view, aes(cumu, pct, label = rank, color = rank>pcs))+
    geom_text()+geom_vline(xintercept = 90, color =
  ↪"grey")+geom_hline(yintercept = min(pct[pct>5]), color = "grey")+
    theme_bw()
  return(list(PCselect = c(pcs, co1,co2), p = p))
}
```