

Flow Chart: mAb Upstream Process

Inoculate 100ml spinner flask with $\sim 1.8 - 2.0 \times 10^7$ cells from cell bank



Monitor the cell growth every 24 hours
Perform O.D.₆₅₀, cell concentration and cell viability assays and pH measurement
Save 1ml sample of conditioned medium at each time point for performing glucose and lactate assays and API concentration by ELISA



Scale up to 1L bioreactor when the cell concentration reaches to $\sim 1.0 - 2.0 \times 10^6$ cells/ml
Usually day 6 or 7 or when cell concentration indicates that the culture has reached plateau phase



Monitor the cell growth in the bioreactor every 24 hours by performing O.D.₆₅₀, cell concentration, cell viability and pH and DO. Save 1ml sample of conditioned medium at each time point for performing glucose and lactate assays and API concentration by ELISA



Harvest the Bioreactor when the cell concentration reaches to $1.0 - 2 \times 10^6$ cells/ml.
Usually day 6 or 7 or when cell concentration indicates that the culture has reached plateau phase



Refer to mAb downstream process flow chart for harvest, centrifugation and filtration steps.