

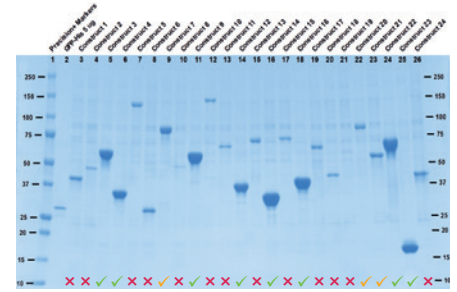
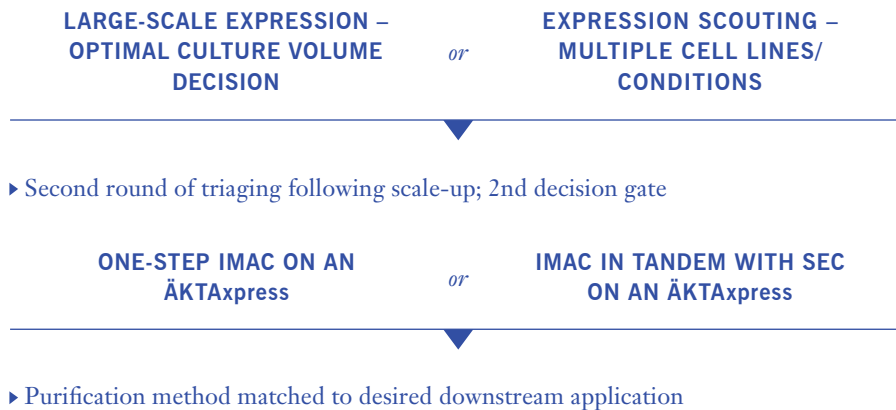
# HIGH-THROUGHPUT PROTEIN PRODUCTION

- ▶ Expression of multiple constructs in parallel
- ▶ Small-scale expression scouting and construct triaging to large scale
- ▶ Semi-automated purification on robotic and ÄKTAexpress systems
- ▶ Fast, cost effective methods routinely delivering  $\geq 90\%$  pure protein in mg scale

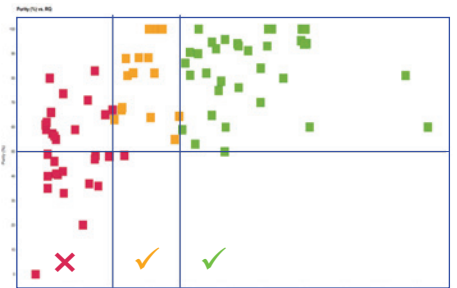


## WORKFLOW FOR MULTIPLE BATCHES OF 96 CONSTRUCTS (MAMMALIAN, BACULOVIRUS AND *E. coli*)

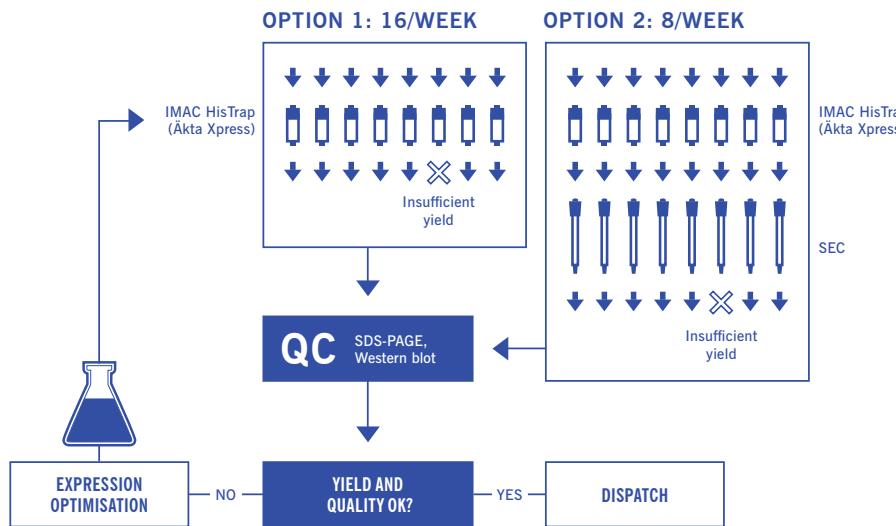
- ▶ Expression screening of constructs in parallel
- ▶ PhyNexus pull-down experiments – SDS-PAGE/Western
- ▶ Construct triage by densitometry modelling – highly predictive of purification success; 1st decision gate



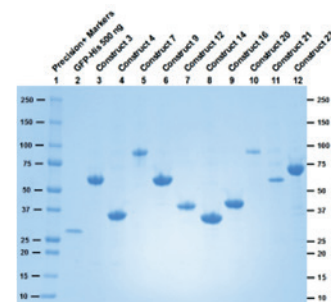
Parallel small-scale expression testing



Likelihood of success is predicted by densitometry model



Purification workflow resulting in protein for applications including biophysics and crystallography



- ▶ Typical yields range from 5–100 mg of  $\geq 90\%$  pure protein from 1–3 litres of culture
- ▶ Pure protein for multiple downstream experiments
- ▶ Simplified, streamlined and lean process — reproducible, parallel and cost effective