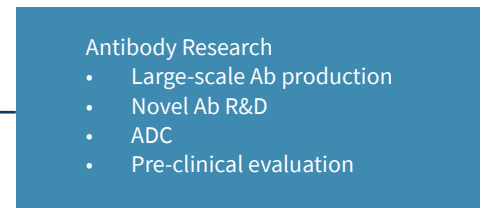
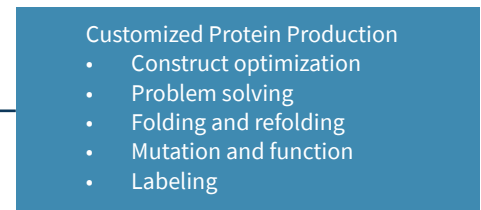
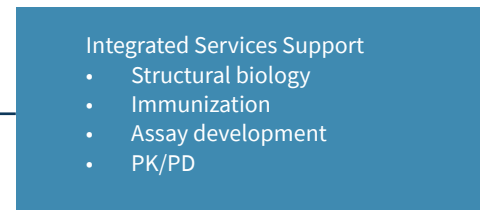
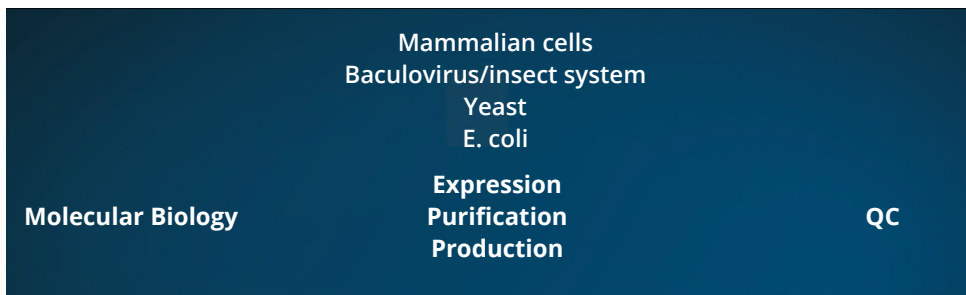




PROTEIN SCIENCES

WE ARE

- Experts in protein production and x-ray crystallography
- Flexible and adaptable
- Experienced in solving difficult problems for customers



WE EXCEL

- Standardized transient transfection of CHO or HEK293 cells
- Standardized recombinant expression in insect or E. coli cells
- 5-8 weeks from DNA to final products
- High quality and quantity

PROTEIN EXPRESSION CAPABILITIES

WE PROVIDE

- A wealth of experience in molecular biology, protein expression and purification
- A team of highly trained scientists able to progress projects from construct design to protein expression in as little as 5-8 weeks.
- Full protein characterization

KEY FEATURES

- Efficiency
 - » From amino acid sequence to protein in as little as 5 weeks
- Cell signaling assays
 - » Choice of tags
 - » Choice of expression systems (mammalian, baculovirus, yeast, E.coli)
 - » Choice of protein chromatography columns (affinity, SEC, IEX, HIC)
- Scale
 - » Up to 200L expression cultures
 - » Able to delivery multi-mg quantities of purified protein
- Quality
 - » Range of analytical techniques (DSF, MST, SEC, UV, MS, SEC-MALS, SDS-PAGE, CE-SDS, RP-HPLC, etc.)
 - » Deliver high quality protein for x-ray crystallography, NMR, bioassay development/screening, fragment screening, antibody reserach
- Successful track record

INTEGRATED SERVICES & CUSTOMIZED PROTEIN PRODUCTION

| | Receptors/Ligands | Cellular Signaling | Enzymes & Complexes |
|------------------------|-------------------|--------------------|---------------------|
| Number of projects | > 100 | > 50 | > 400 |
| Quantity (per project) | 5-100 mg | 5-100 mg | 5-200 mg |

| Protein Name | Qty | Purity | Mass Spec. | X-ray Diffraction |
|-----------------------|---------|--------|---------------------------------|-------------------|
| Integrate Service XXX | > 20 mg | > 99% | Double peaks (poor homogeneity) | 8.0 Å |

Client Protocol

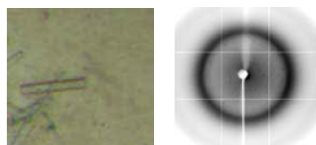
- High yield but poor homogeneity
- Poor crystal quality



| Protein Name | Qty | Purity | Mass Spec. | X-ray Diffraction |
|-----------------------|---------|--------|--------------------------------|-------------------|
| Integrate Service XXX | > 10 mg | > 99% | Single peak (good homogeneity) | 2.2 Å |

Optimized Protocol

- Extra purification step
- Trade yield for homogeneity
- Improved crystal quality



Our optimized purification protocol for the client largely improved homogeneity. It also helped our Structural Group with their X-ray crystallography work.