WuXi AppTec

WuXi Biology

Protein Science in WuXi Biology

Benefiting from more than 15 years of expertise in protein production and structural biology, the protein science platform in WuXi Biology has successfully served hundreds of global clients. Our protein science scientists are at the forefront of international drug discovery efforts, offering a wide range of services including protein production and engineering, X-ray crystallography, NMR and cryo-EM across various target classes.

Protein Production Services

Comprehensive Technologies

- Sites in **Munich** and **Suzhou** - high capacity and flexibility
- Complete tech-support from end to end
- Comprehensive biophysical, biochemical and cell-based assays, and structural biology services available - fully integrated
- **>1,200** assay grade proteins produced

Capacities

- **>30** core protein production instruments
- **>98%** expression success rate in past three years
- **>1,200** annual protein production lots
- **>10,000 Liters** annual protein expression volumes

Capabilities

Experienced in all protein target classes

- Membrane proteins (e.g., ion channels and GPCRs)
- Transcription factors
- RNA/DNA modifying proteins
- Ubiqutin ligases
- Kinases
- Other enzymes

View our ProTGo website for more

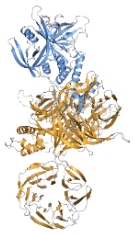
Structural Biology Services

X-ray crystallography

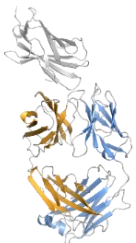
- **>200** crystal high-quality structures delivered each year
- Weekly access to various third-generation synchrotrons
- Intensive in-house light source for immediate data collection
- Three service modes suitable for different scenarios

- **XPRESS**: Ready-to-go service for **>150** off-the-shelf targets
- **XPEDITE**: Gene-to-structure service based on published structures
- **XPERT**: Gene-to-structure service for challenging projects

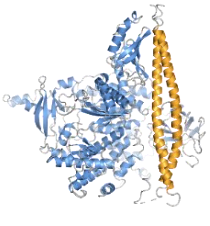
View our complete XPRESS portfolio



Cereblon-DDB1
E3 family



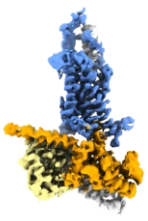
Target X-Fab
Antigen-antibody



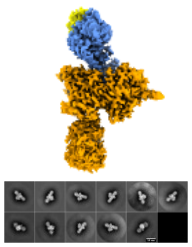
PIK3Cα-PIK3R1
Phosphatidylinositol kinase

Cryo-EM

- Rapid regular access to state-of-the-art cryo-EM infrastructure
- In-house GPU processing infrastructure
- Suitable for protein complex and membrane protein



PAC1R
GPCR



CRBN-DDB1-IKZF2
E3 Family

NMR spectroscopy

- 1D ligand-observed (STD + WaterLOGSY) and protein-observed (HSQC) solution-state analysis
- Binding position, affinity, real-time conformational changes
- Very low false-positive/negative probability

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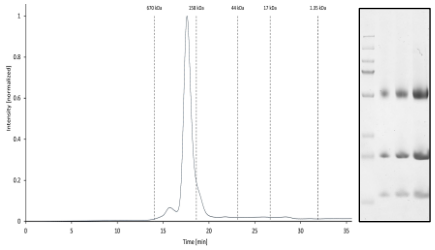
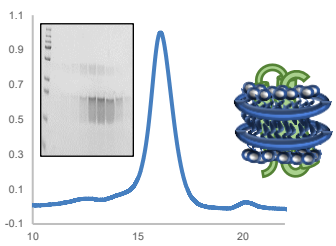
Case Study: GPCR / Membrane Protein

Tailored to Downstream Applications

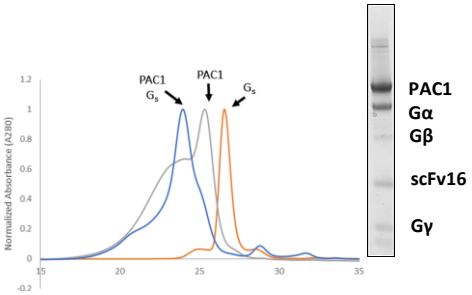
Muscarin receptor-Nb-Fab complex



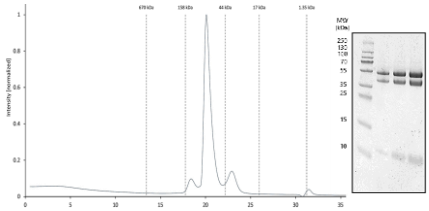
CNR1 in Nanodiscs



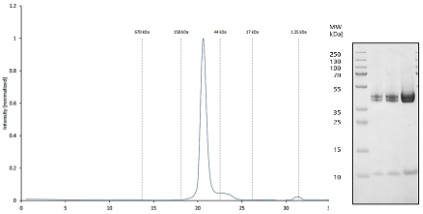
PAC1-Gs complex



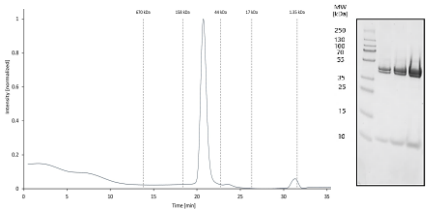
G-protein: Gαs-β-γ



G-protein: Gαi-β-γ

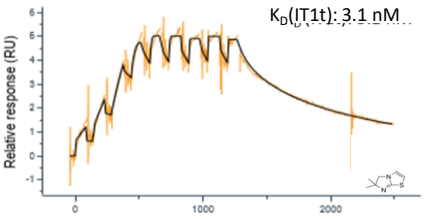


G-protein: Gαq-β-γ

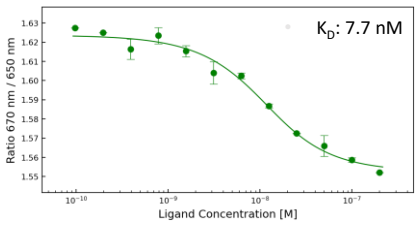


Assessing Small Molecule Binding by SPR, MST and nanoDSF

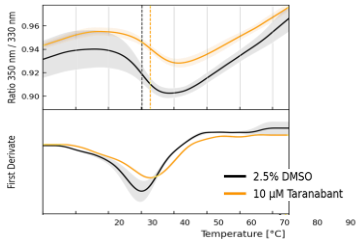
SPR: CXCR4 vs IT1t



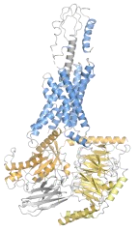
MST: GLUT1 vs BAY-876



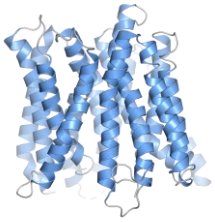
nanoDSF: CNR1 vs Taranabant



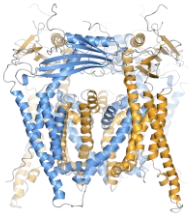
Structure Solutions by Cryo-EM and X-ray Crystallography



PAC1-Gs complex
by Cryo-EM



Peptide transporter
by LCP / X-ray



TRPML1
by Cryo-EM

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