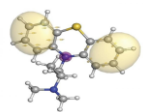
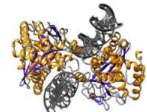


# SCREENING SOLUTIONS

## Diverse Library Collection



**Diversity Library**  
Drug-like small molecule

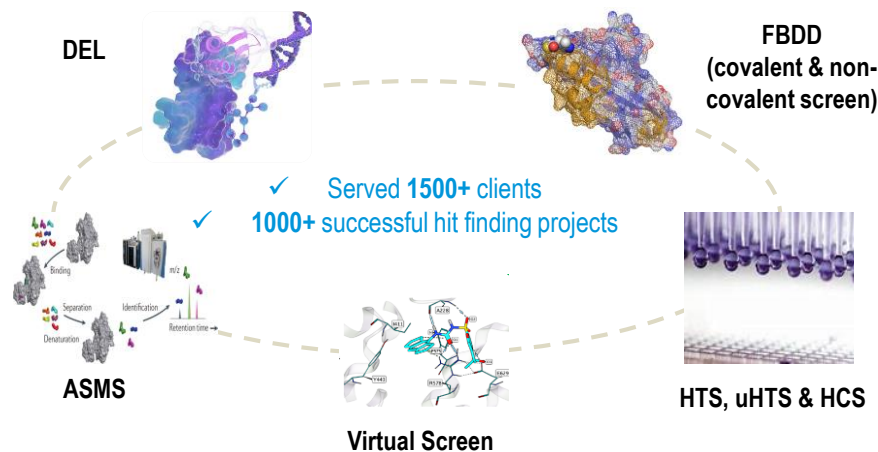


**Specialty Library**  
Target class or disease area focused, kinase, protease, CNS, RNA, etc.

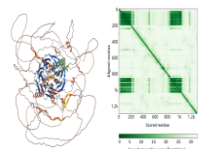


**New Modality Library**  
Novel chemical space including covalent, bi-functional and cyclic peptide

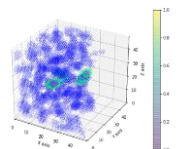
## Comprehensive Screening platforms



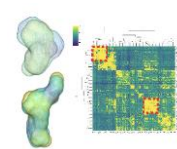
## Data Science



AlphaFold



Machine Learning



Pocket Analysis



## Ready-To-Go Assays for Broad Range of Drug Targets



**Established Assays**  
Optimized assay conditions



**Flexible**  
Single/multiple assay in parallel



**Cost-effective**  
Low budget high quality data



**Fast Turnaround Time**  
Up to 2 weeks

## Targets ready for MST, TRIC, SPR, nanoDSF, biochemical assays

ALK	AKT1
BTK	BLM
NLRP3	CCNH/CDK7
KRAS/NRAS	CRBN/DDB1
PIK3CA/PIK3R1	cREL
PRMT5/WDR77	DOCK5
STAT2,3,4,5a,5b,6	EGFR
CDKs/CCNs	SMARCA2
STING	WEE1
USP5, USP7	P38
WRN / RECQL / RECQL4	PolQ Polymerase / Helicase Domain
VHL/TCEB1/TCEB2	SHP2
p53	...



Find more  
**READY-TO-GO** Assays  
target list & case studies

WuXi Biology web



Follow LinkedIn



Contact Us via E-Mail:

[Crelux\\_CR@wuxiapptec.com](mailto:Crelux_CR@wuxiapptec.com)

[DB\\_Service@wuxiapptec.com](mailto:DB_Service@wuxiapptec.com)

# ONE-STOP TARGET-TO-HIT SOLUTIONS



## Protein

- All Target classes
- High level protein engineering
- Tailored tagging strategies
- E.coli*, yeast, insect cells, mammalian cells
- Customized conjugation (e.g., biotinylation)
- Recombinant protein production
- Isotope labeling (15N, 13C)
- Antibody screening and Nanobody
- Comprehensive protein QC

## Screening

### Fragment Based Screening (FBDD)

- WuXi AppTec fragment library (~4600 fragments)
- WuXi AppTec covalent fragment library (~2500 covalent fragments)
- Automated screening (MST/Dianthus, SPR, DSF/nanoDSF)
- Fragment screening via X-ray or NMR

### DNA-Encoded Library (DEL)

- 80+ billion synthetic compounds
- Bioinformatics system to collect, process and analyze data, facilitate involvement of the client to make collective decisions
- DEL + ML

### High Throughput Screening (HTS)

- WuXi AppTec HTS library (~300K)
- Target assay that can be miniaturized

### Affinity Selection Mass spectrometry (ASMS)

- Suited for any soluble target Protein/RNA/DNA
- Seeking novel pocket or MOA

## Hit Confirmation

### Biophysical Panel

- Over 10 biophysical methods available
- Affinity, thermodynamics, stoichiometry, kinetics, thermal & chemical stability, aggregation

### Biochemical Panel

- Enzymatic kinetics, receptor binding kinetics & more
- Luminescence, Fluorescent, TR-FRET, FRET, LANCE, LC/MS, AlphaScreen, Absorbance

### Mass Spectrometry

- LCMS, RapidFire HT-MS and ASMS

### Structural Biology

- X-Ray crystallography, Cryo-EM, NMR

### Cell-based Panel

- AlphaScreen, Luminescence, HTRF, FLIPR
- Reporter gene assay (Luciferase,  $\beta$ -lac, GFP,  $\beta$ -gal, qPCR, etc.)
- Flow cytometry
- Cell line development, cell bank, primary cells & tissues

### High Content & Multiplexing Assays

- Cell imaging and kinetic monitoring for a wide range of phenotypic assays in a quantitative and high throughput mode

# WuXi AppTec TARGET-TO-HIT SOLUTIONS

- WuXi AppTec Discovery Biology provides comprehensive customer services covering the entire target-to-hit platform: protein engineering and production, HTS, ASMS, DEL- and fragment-based screening (FBDD), and hit validation (biophysical, biochemical, and cell-based panels, structure-based drug discovery).
- Discovery Biology has 6 operational sites in China, Germany, and the U.S. and employs more than 1000 skilled scientists to ensure timely delivery of high-quality data.

## PROTEIN SCIENCE & PRODUCTION

### All Target Classes and Challenging Proteins



More information on stocked proteins under **ProTgo**

**Cancer and Inflammation**  
ATM, AMPK, NEK7, PIK3C, ROR1, SRC, ULK1, WEE1, NLRP3

**Membrane Proteins / GPCRs**  
Glucose transporter, P2X3, GPR40, CNR1,  $\beta$ 2AR...

**DNA Damage Response**  
ATM, ATR/ATRIP, CHK1, CHK2, CDKs and cyclins ...

**Neurodegeneration**  
BACE1, PDE, NFE2L2, PTPN1, MAO-B, NTRK1, JNKs...

**RNA/DNA Mod. Proteins**  
Cas9, FEN1, EME1, RIG-I, SND1, WRN, SMARCA2...

**Epigenetic Targets**  
BRD2, BAZ1A, CREBBP, SIRTuins, HDACs, EHMT1...

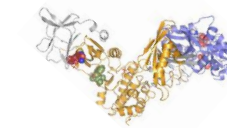
**Immune System**  
cGAS, STING, IL1, ILRL1, MMPs, STATs, antibodies...

Over  
**1500**  
Proteins  
Produced

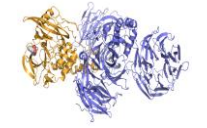
**1200**  
Assay Grade  
Proteins (verified for  
biophysical  
methods)

**>250**  
Crystallization  
Grade Proteins  
(verified  
crystallization  
protocols)

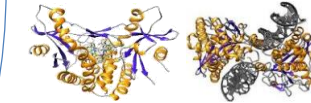
**Protein Complexes**  
AMPK – AMP activated protein kinase



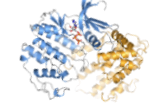
**Protein Degradation**  
E3 ligase – CRBN/DBP1



**Immune Therapy / Rare Diseases**  
STING/ cGas - pathway



**Cell Cycle Regulation**  
CDK2-Cyclin A Kinase

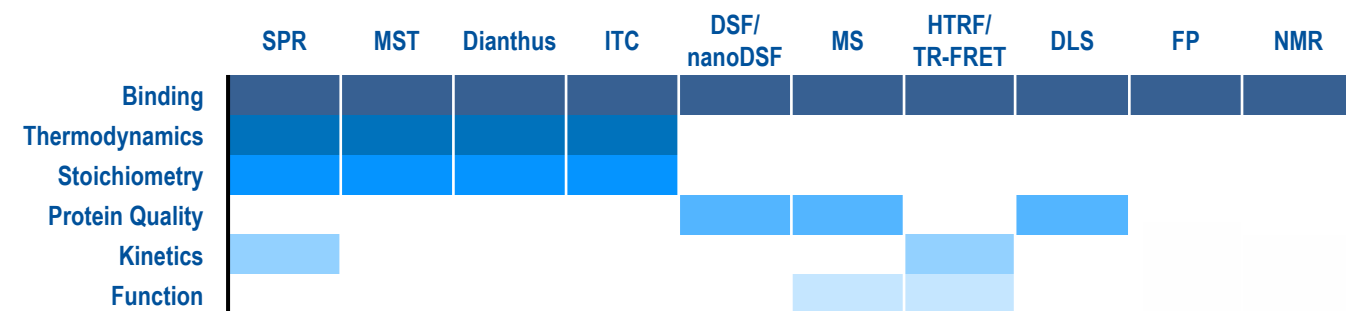


**Membrane Proteins / GPCRs**  
P2X3-ATP-gated ion channel, CNR1, GPR40, Glucose transporter...

**RNA/DNA Modifying Proteins**  
SMARCA2 – chromatin remodeling / DDX58 – RNA helicase...

## BIOPHYSICAL & BIOCHEMICAL PLATFORMS

### Broadest Technologies Suit for Hit-finding Globally



**Biacore™  
8K/8K+ SPR**

Kinetic characterization  
& HTS



**Monolith NT  
Automated MST**

Binding  
characterization &  
HTS



**Dianthus PicoDuo  
TRIC/Spectral Shift**

Binding  
characterization &  
HTS



**Prometheus Panta  
nanoDSF/DLS**

Thermal Stability  
Chemical Stability  
Aggregation



**Monolith X  
Spectral Shift**

Measure Spectral  
Shift and MST  
simultaneously



**Q-TOF LC/MS  
RapidFire**

Intact Mass  
Peptide Fingerprinting  
Covalent Screen

## STRUCTURAL BIOLOGY

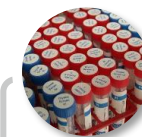


**Xpress Portfolio**  
established crystallization  
conditions

### X-Ray Crystallography



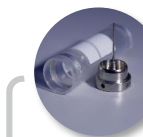
Crystal grade  
protein  
production



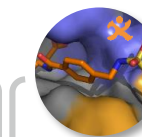
Screening of  
myriad  
crystallization  
conditions



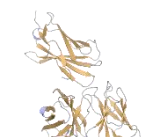
Fine-tuning of  
crystallization  
conditions to grow well  
diffracting crystals



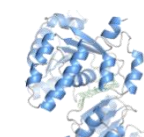
Preparation of  
crystals for  
collection of X-ray  
diffraction data



Data processing,  
structure solution  
and refinement



Fab-antigen  
complexes



WRN,  
Inhibitor bound

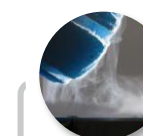
### Cryo-EM



Cryo-EM grade  
protein  
production



EM feasibility  
analysis  
(negative  
staining EM)



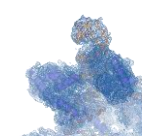
Cryo-EM  
conditions  
optimization



Cryo-EM  
imaging



Data processing  
structure solution



SluCas9 and sRGN Ternary Complexes  
Nuclease-RNA-dsDNA

