



WRN

Structural Biology

Structural Biology

Discovery Biology Department, WuXi Biology

Robert Byrne - Head of Structural Biology

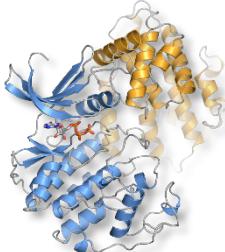
robert_byrne@wuxiapptec.com



Structural Biology Services

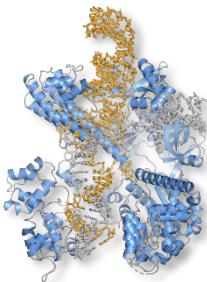
Comprehensive Range of X-Ray Crystallography and Cryo-EM Services

Off-the-Shelf Targets



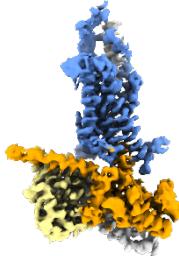
- Over 150 targets from broad range of classes
- Rapid turnaround time

Gene-to-Structure Targets



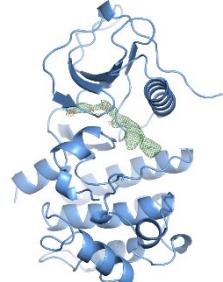
- Full gene-to-structure service
- Previously characterized and new targets

Membrane Proteins



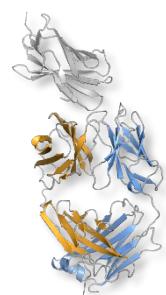
- Structure determination by cryo-EM and crystallography

Fragment Screening



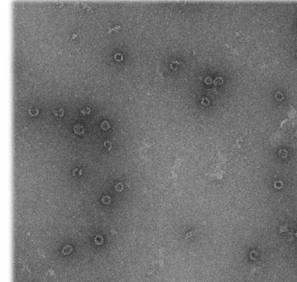
- High-throughput screening as primary or secondary screen

Biologicals



- Fab fragments, VHVs, IgGs and their complexes

Particle Characterization



- Lipid- and virus-like particle characterization

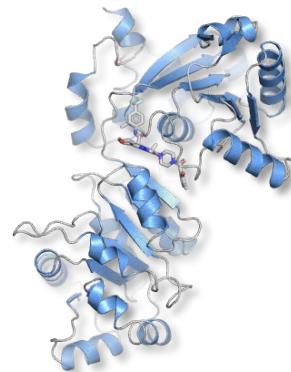
Custom Services

- Construct design
- Crystallization screening and optimization
- Crystal soaking
- Data collection
- Model building and refinement

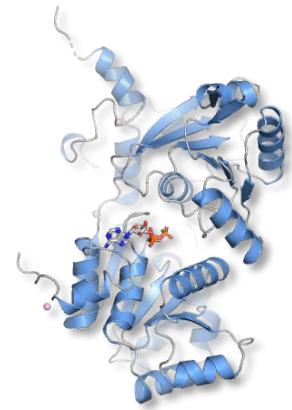
WRN Helicase

Off-the-Shelf Structural Biology Constructs

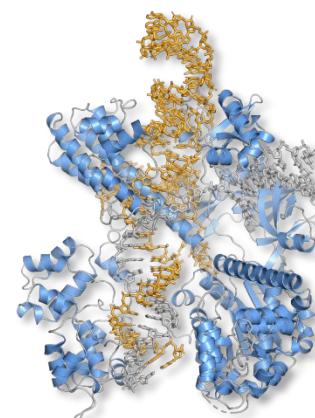
- Experience in the production of helicases, innate immune system sensors, modification enzymes, nucleases and transcription factors for biophysics and structural biology
- Established MST, nanoDSF and SPR assays for biophysical screening and characterization of proteins, protein-nucleic acid and protein-nucleic acid-ligand complexes
- Successfully structurally characterized examples:
 - Helicases – WRN, SMARCA2
 - Innate immune system sensors – cGAS (Human and Mouse) and cGAS-dsDNA (Mouse)
 - Modification enzymes - APOBEC3B, PARP1
 - Nucleases – CAS9-sgRNA-dsDNA, FEN1, SND1
 - Transcription factors – ROR γ , STAT6
- Over 25 structures of WRN determined at up to 1.6 Angstroms resolution



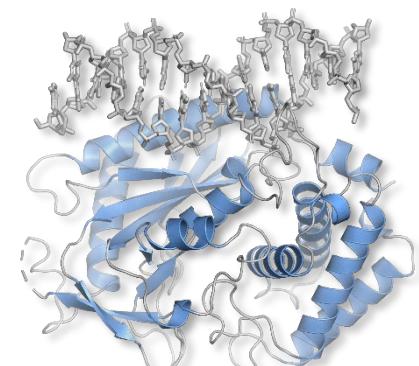
WRN-
HRO-761



WRN-
ATP- γ -S



CAS9-sgRNA-dsDNA



cGAS-dsDNA

WRN Helicase

Off-the-Shelf Structural Biology Constructs

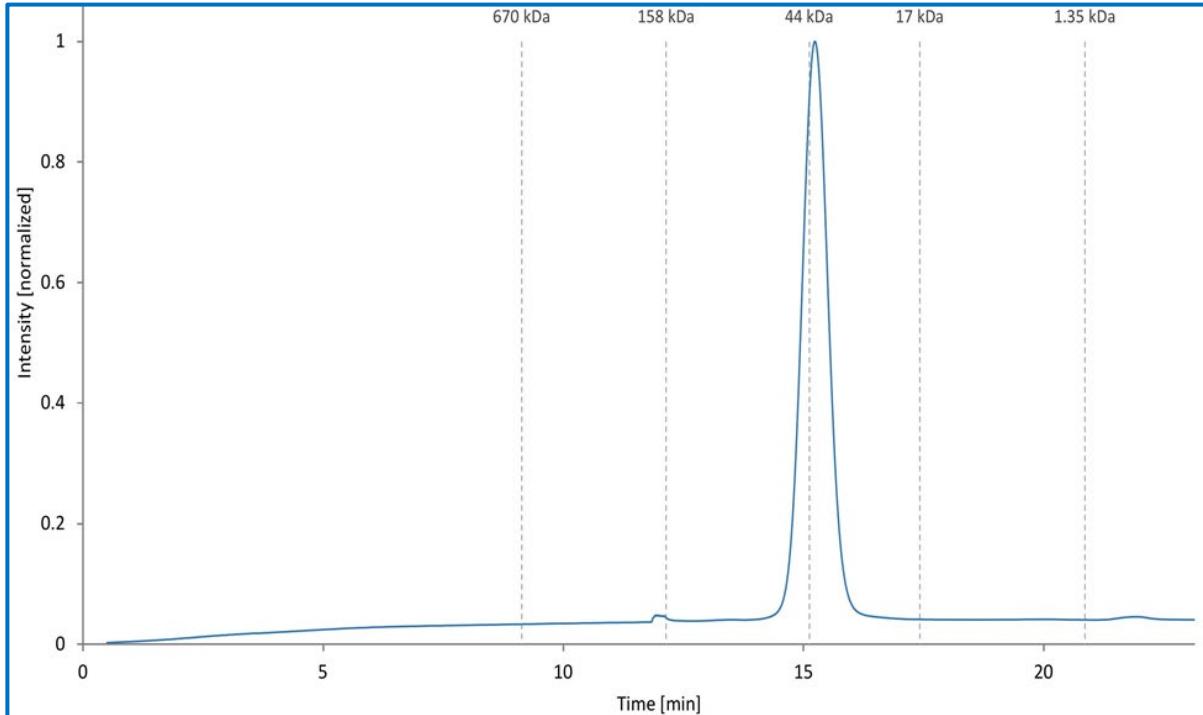
SDS-PAGE



- 10% Tris-Glycine gel
- Reducing condition
- Coomassie stained

Lane	Quantity
1	Marker
2	1 µg
3	2 µg
4	5 µg

aSEC Chromatogram

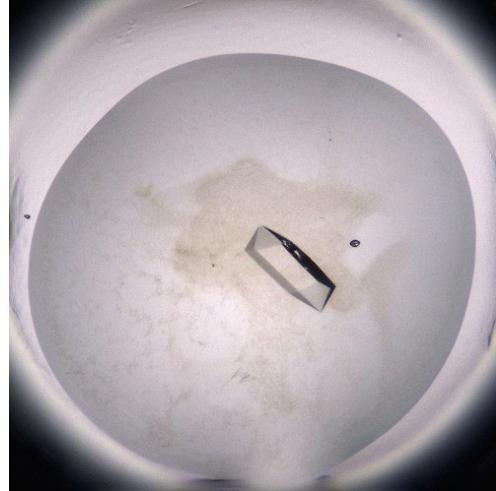


- Column: S200 increase 10/300
- Running buffer corresponds to storage buffer
- Retention time of globular standard proteins is indicated by dotted lines

WRN Helicase

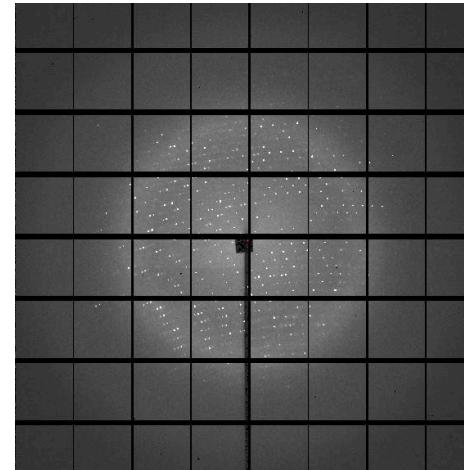
Off-the-Shelf Structural Biology Constructs

Crystallization



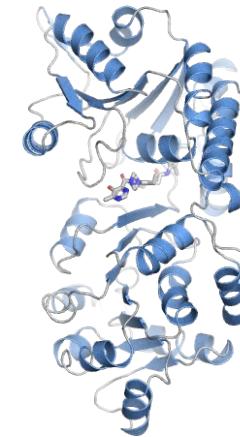
- Representative crystals of WRN (Construct DJG76) in complex with HRO-761

Data Collection



- Representative diffraction pattern of WRN (Construct DJG76) in complex with HRO-761

Overall Structure



- Overall structure of WRN (Construct DJG76) in complex with HRO-761

XPRESS Portfolio

Broad Range of Off-The-Shelf Targets

Kinases

AMP kinase, BRAF, BTK, CDC7-DBF4, CDK1-CKS2-CCNB1, CDK2, CDK2-CCNA2, CDK2-CCNE1, CDK6, CDK9-CCNT1, CDK12-CCNK2, CK1a, CK1d, EGFR, FGFR2, FGFR3, FGFR4, IRAK3, IRAK4, JAK1, JAK2, JNK1, JNK2, JNK3, KIT, LCK, MAP4K1, MKNK2, PIK3Ca, PIK3Ca-PIK3R1, PIK3Cγ, PIP4K2α, PIP4K2β, PIP4K2γ, PKA, PKM2, PKR, RSK1, SIK3, SRC, TYK2, WEE1

Proteases

3C-like protease (SARS-CoV-2 and Norovirus), Cathepsin K, Cathepsin S, MALT1, USP7, USP21

Targeted Protein Degradation

CRBN, DDB1, SKP1-SKP2, SKP1-SKP2-CKS1, VHL-Elongin B-Elongin C

Histone Modification

BRD4, BRD9, CREBBP, HDAC2, HDAC7, HDAC8, JMJD2C, JMJD2D, MLLT1, NSD1, PRMT5-WDR77, SIRT2

Innate Immunity

cGAS, STING

Nuclear Receptors

ER α , GR, ROR γ

Nucleic acid binding proteins

APOBEC3B, cGAS, PARP1, SMARCA2, SND1, STAT6, WRN

Over
150
Targets

Complete XPRESS Portfolio available on
our website

[Link](#)

Contact Us



Business Development Contact



Mahnaz Arjomand Executive Director, US BD Head



Mahnaz_Arjomand@wuxiapptec.com



+1 415 755 3735



Fumio Itoh Executive Director, Japan BD Head



fumio_itoh@wuxiapptec.com



+81 75 315 1044



Dave Madge Vice President, EU and Israel BD Head



dave_madge@wuxiapptec.com



+44 7803 124321



Marcher Xu Senior Director, China BD Head



xu_longji@wuxiapptec.com



+86 185 0210 0621



Suk Young Cho Executive Director, Korea BD Head



sycho@wuxiapptec.com



+82 31 724 2861



Customer Service



wuxiconcierge@wuxiapptec.com



400-820-0985

www.wuxiapptec.com



WuXi AppTec website



WuXi Biology website



LinkedIn

Improving Health.
Making a Difference.

