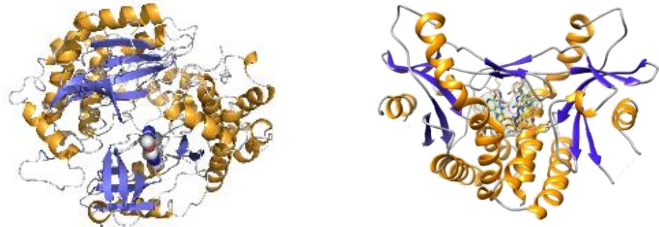
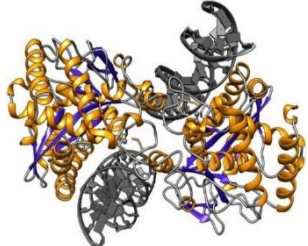


Protein Production at WuXi AppTec's HitS



Expertise Across All Target Classes

Seamless platform from protein production to structure-based drug design

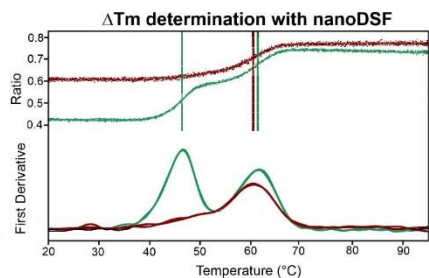
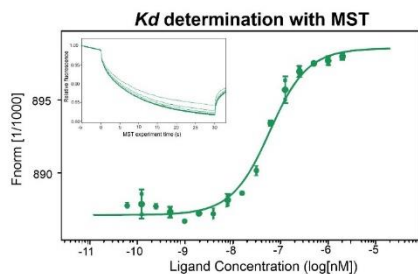
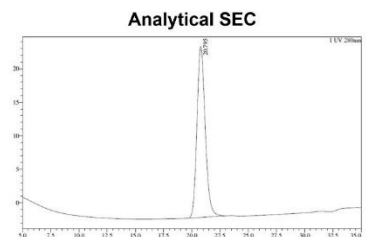
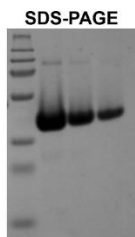
Kinases	ATM, AMPK, NEK7, PI3K, ROR1, SRC, ULK1, WEE1...	
Membrane Proteins	Glucose transporter, P2X3, GPR40, CNR1, β 2AR...	
DNA Damage Response	ATM, ATR/ATRIP, CHK1, CHK2, CDKs and cyclins ...	
Neurodegeneration	BACE1, PDE, NFE2L2, PTPN1, MAO-B, NTRK1, JNKs...	
RNA/DNA Mod. Proteins	Cas9, FEN1, EME1, DDX58, SND1, WRN, SMARCA5...	
Epigenetic Targets	BRD2, BAZ1A, CREBBP, SIRTuins, HDACs, EHMT1...	
Immune System	cGAS, STING, IL1, ILRL1, MMPs, antibodies...	
		<p>Over 1200 proteins purified</p> 

Focus on Protein Quality

Mass spectrometry and nanoDSF analyses guarantee the identity and proper folding of a protein

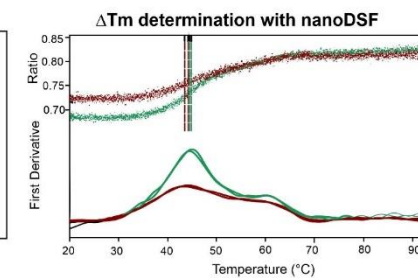
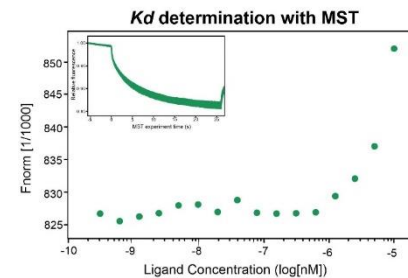
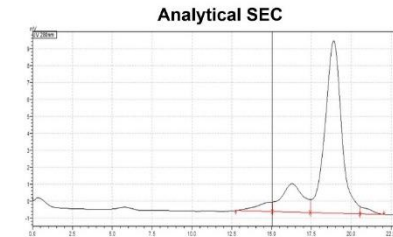
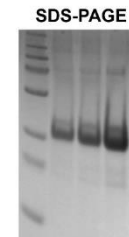
CRELUX PRIME Protein

E. coli / multistep purification



Catalogue provider

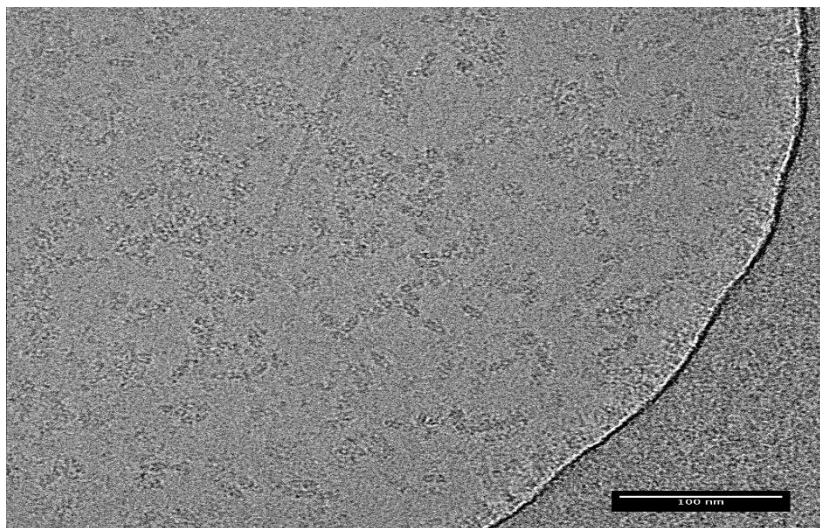
E. coli / unknown



Focus on Protein Quality

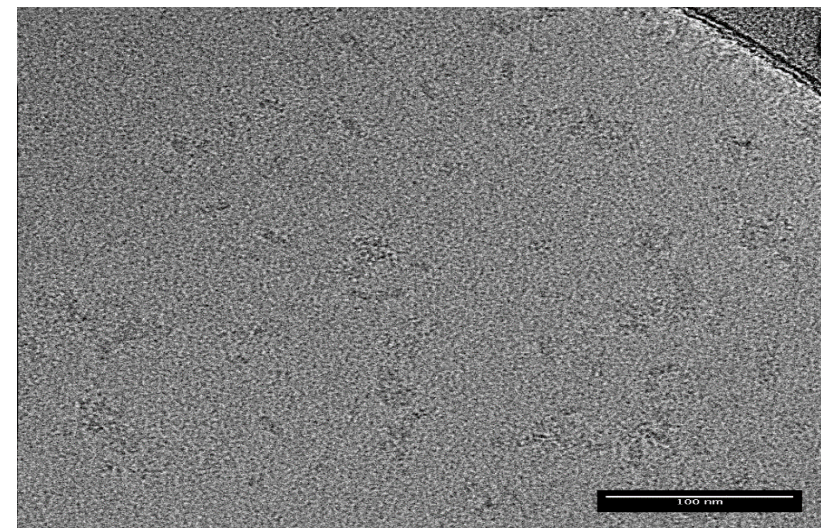
Cryo-EM images endorse excellent protein quality of 700 kDa dimeric soluble complex

CRELUX Cryo-EM Protein for



Excellent particle distribution and density

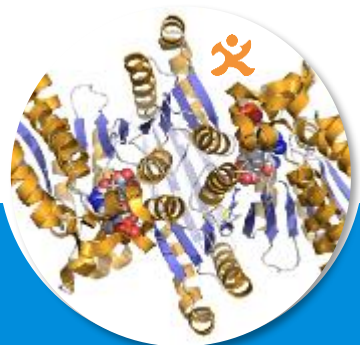
Competitors Cryo-EM Protein for



Degraded protein and clumping

Workflow Protein Production

Unique platform for tailored high purity protein production



Construct Design

Extensive protein engineering can be performed to deliver a target protein that perfectly suits your downstream application.



Cloning

Enhanced expression systems are used.



Expression

Rapid identification of optimal conditions through parallel test expression in *E.coli*, insect or mammalian cells.



Purification & QC

Each protein undergoes extended QC that includes SDS-PAGE, SEC, and MS analysis.



Delivery

The proteins are delivered on dry ice by a carefully selected carrier.

Enhanced Protein Expression Tools

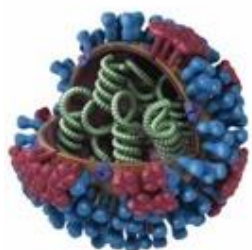
Insect cell expression of protein complexes

Influenza Virus-Like Particles (VLPs)

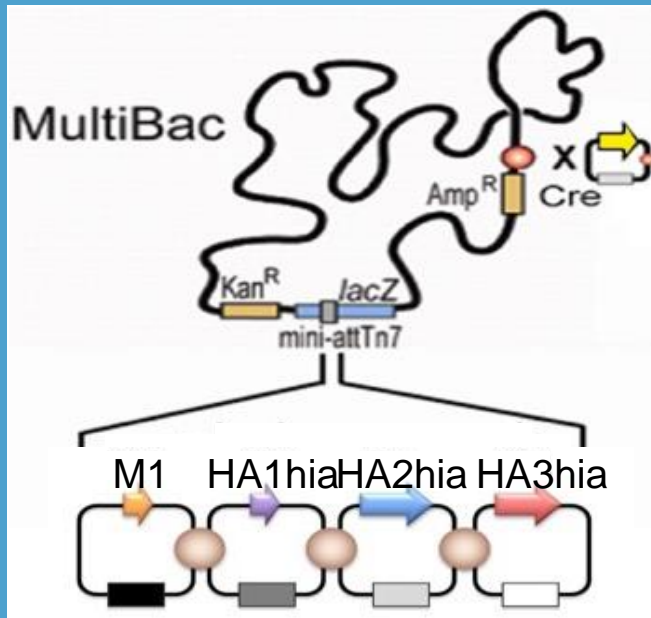
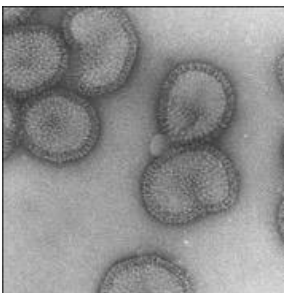
MultiBac VLP Factory

Flu VLPs

Influenza Virus

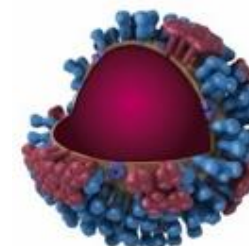


infectious

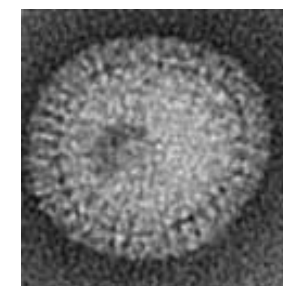
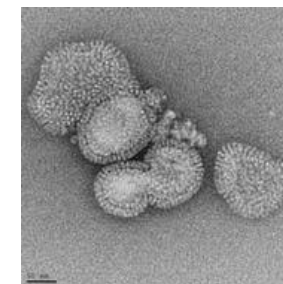


Complex
INC

Synthetic Influenza
Virus Like Particle (VLP)



safe

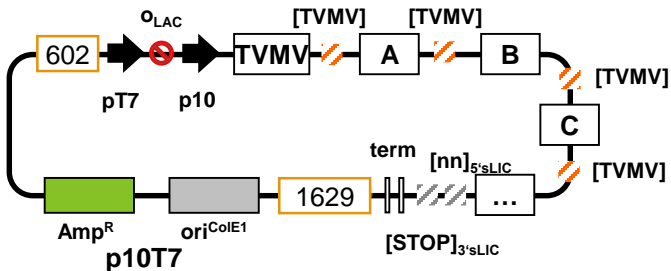
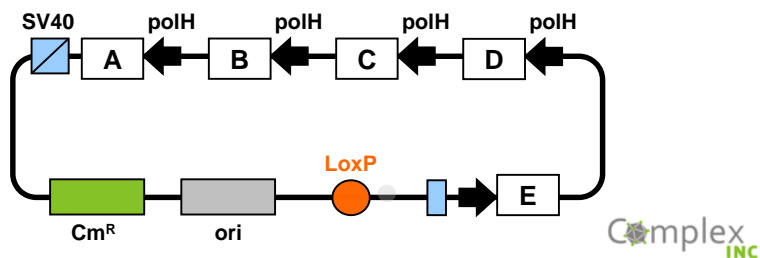


Enhanced Protein Expression Tools

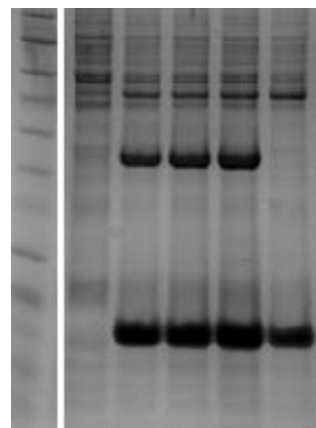
Mammalian / insect cell expression of protein complexes

MultiBac™/ ComplexLink™

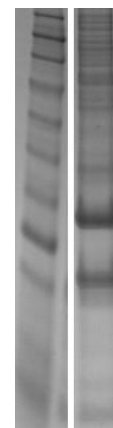
Protein complex production by BVES/BacMAM



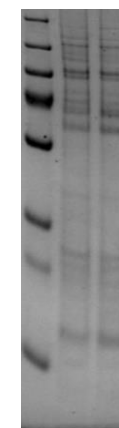
HDAC3/NCOR-SMRT
49/17



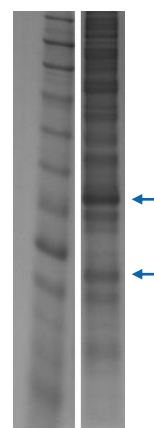
CDK9/CCNT1
37/29



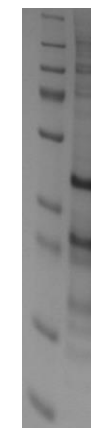
Kinase 1/2/1
64/23/59



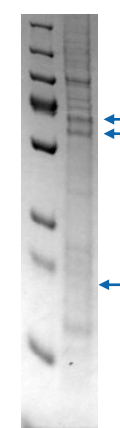
CDK8/CCNC
43/32



CDK12/CCNK
40/30



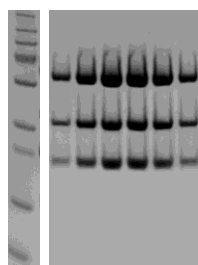
Kinase 2/2/3
63/23/58



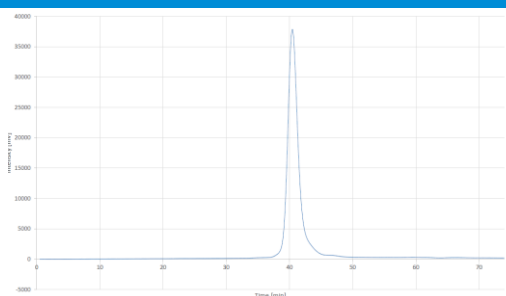
Protein Complexes

AMPK – AMP activated protein kinase

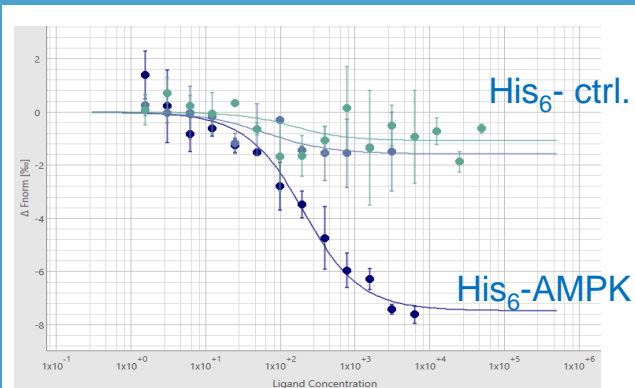
PRIME Protein Production



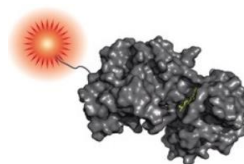
PRKAA1
PRKAG1
PRKAB1



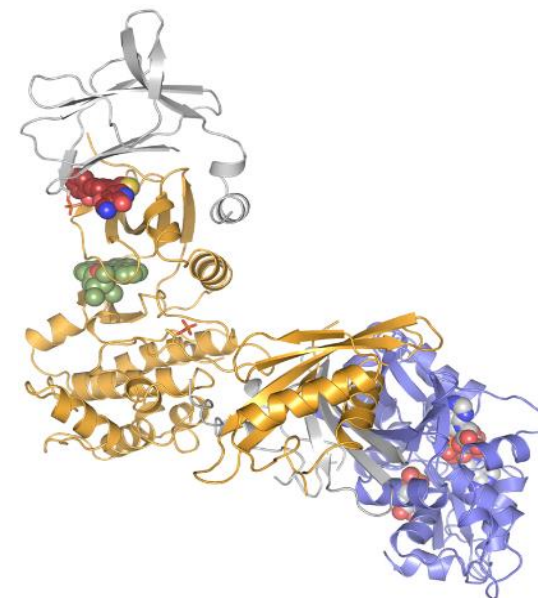
Biophysics - MST



K_d (small molecule) =
150 ± 50 nM



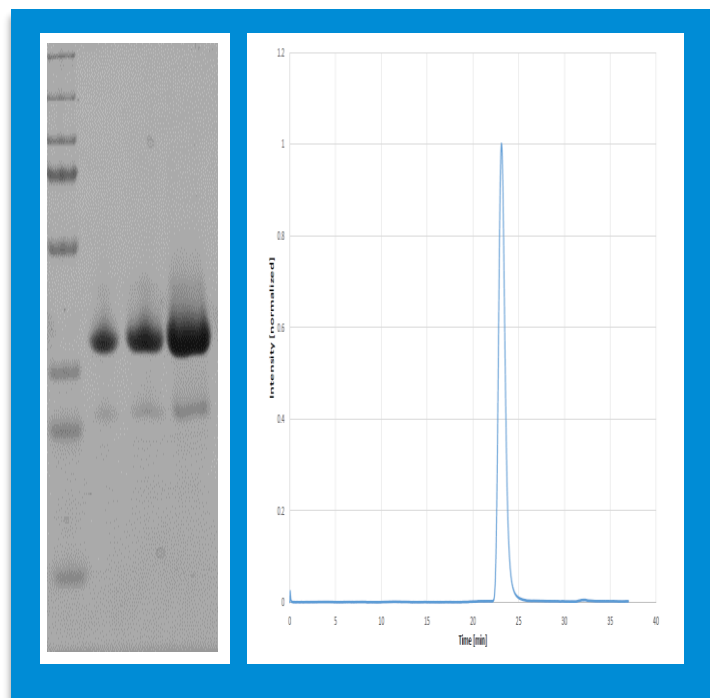
X-ray crystallography



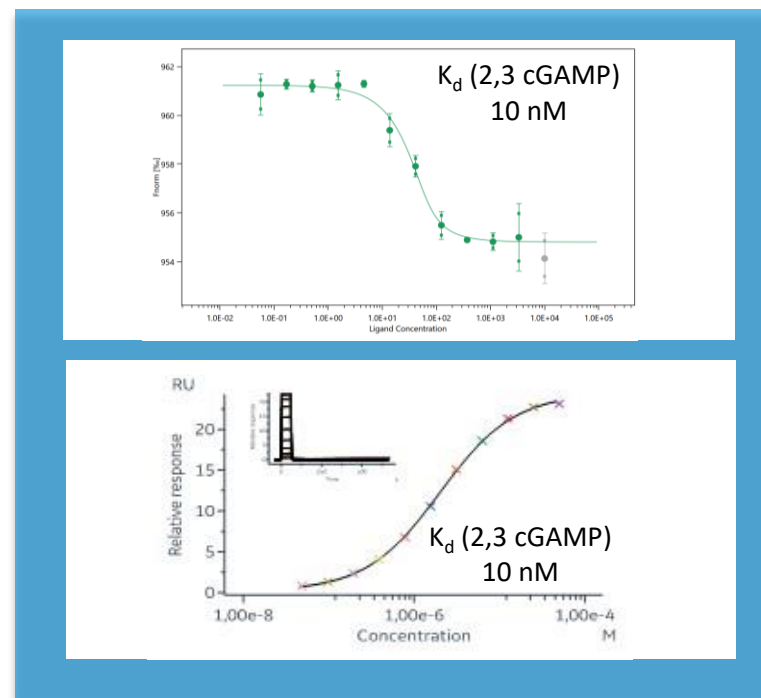
Immune Therapy / Rare Diseases

STING – stimulator of interferon genes

PRIME Protein Production



Biophysics - MST



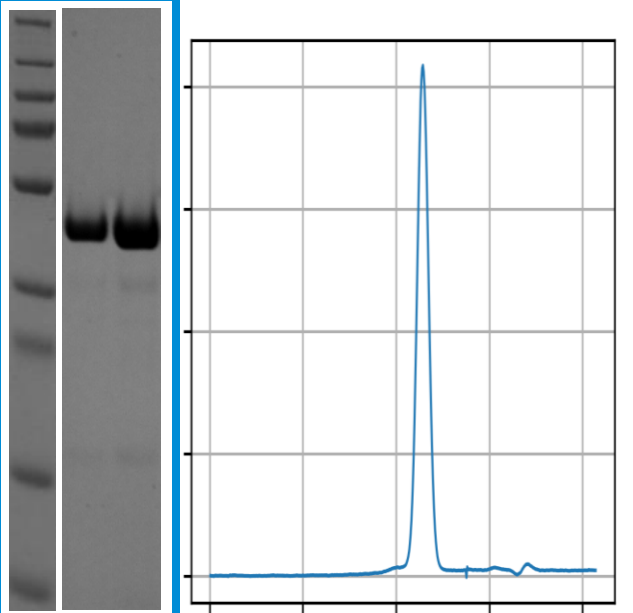
X-ray crystallography



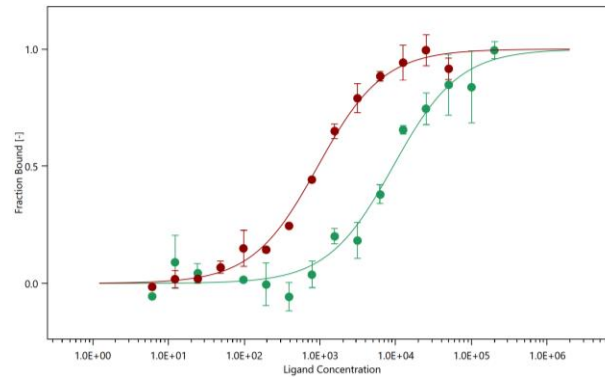
Immune Therapy / Rare Diseases

cGAS – DNA sensor in the STING pathway

PRIME Protein Production

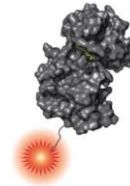


Biophysics - MST

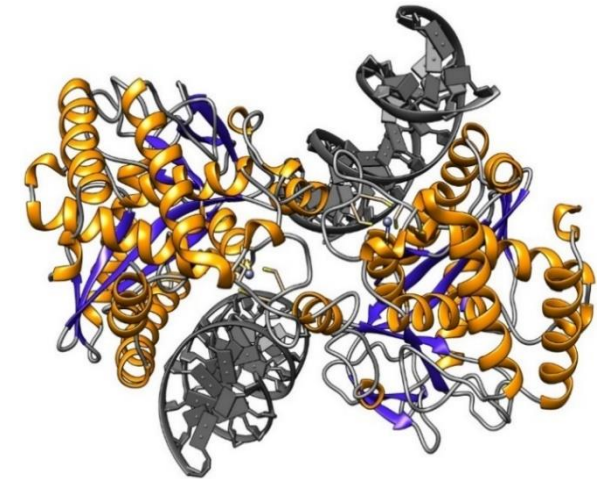


K_d (50 mer DNA): 0.6 μM

K_d (19mer DNA): 7.8 μM



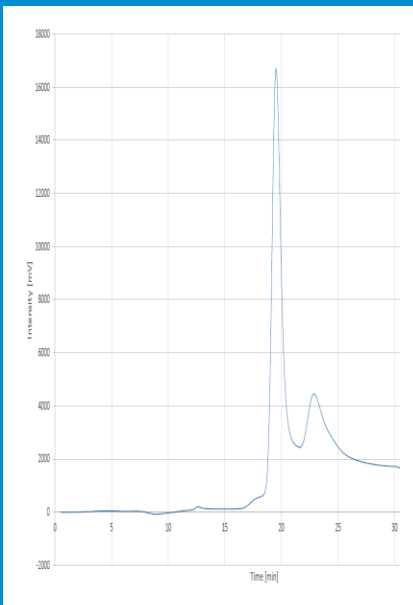
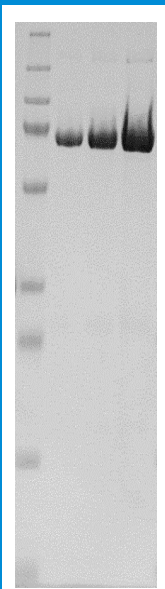
X-ray crystallography



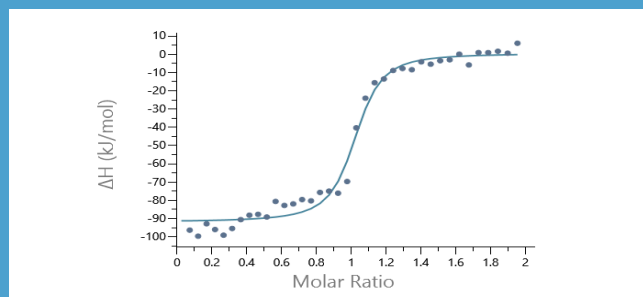
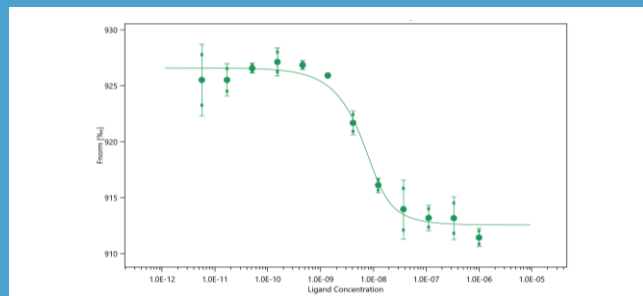
DNA Modifying Proteins

SMARCA2 – transcriptional regulator / chromatin remodeling

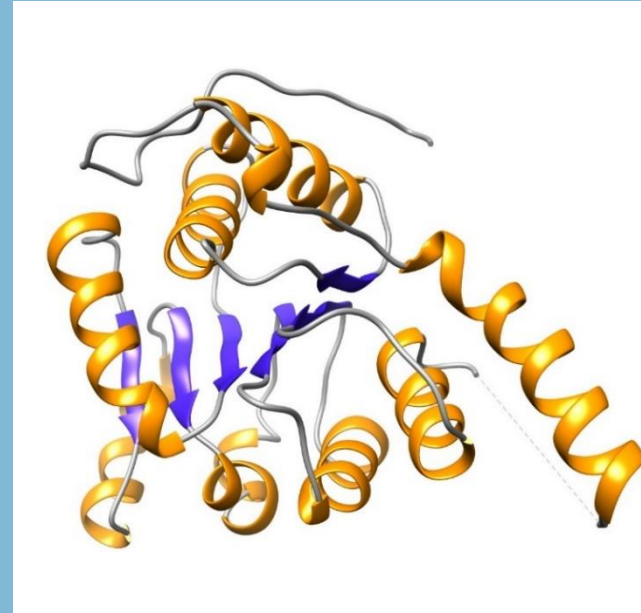
PRIME Protein Production



Biophysics - MST



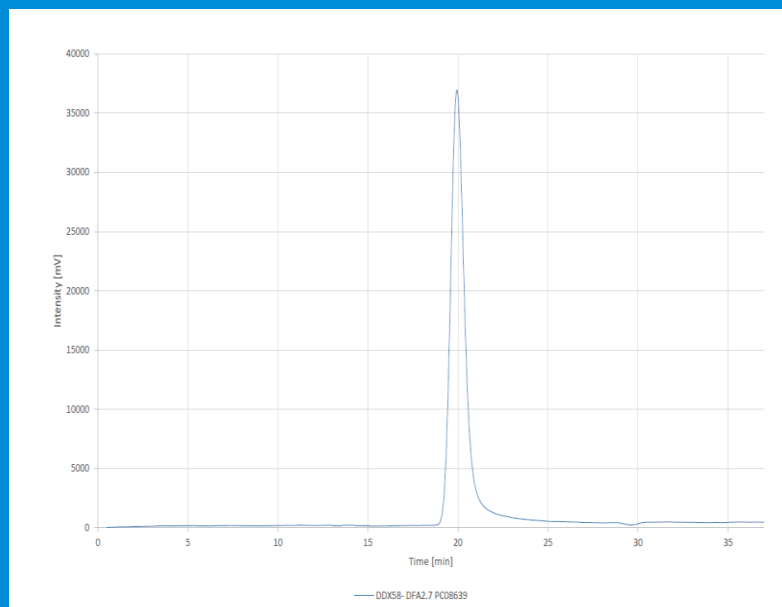
X-ray crystallography



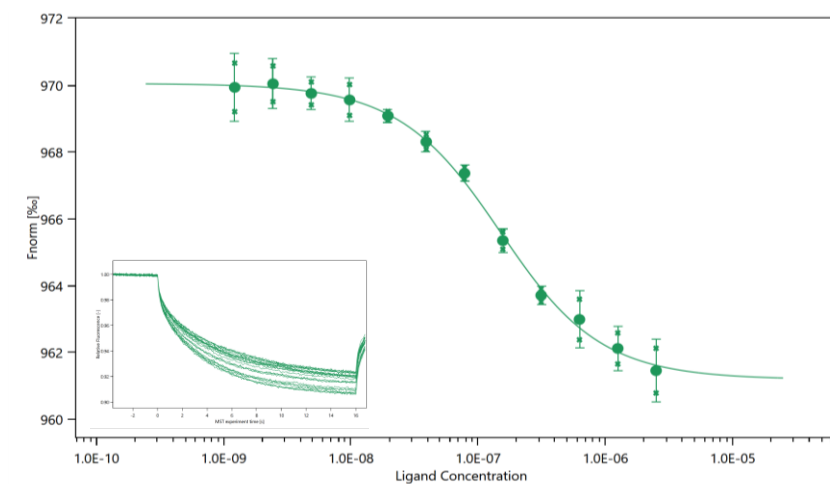
RNA Modifying Proteins

DDX58 – ATP-dependent RNA helicase

PRIME Protein Production



Biophysics - MST

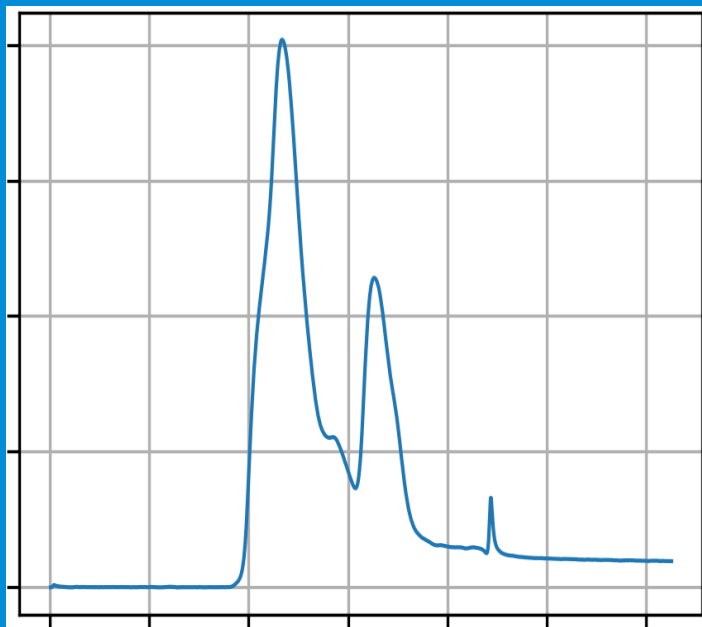
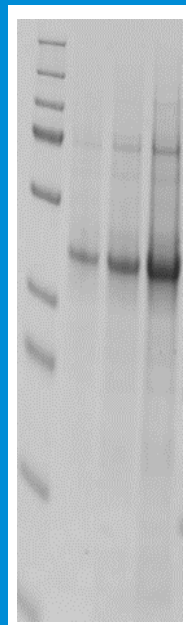


$$K_d (\text{dsRNA}) = 123 \pm 10 \text{ nM}$$

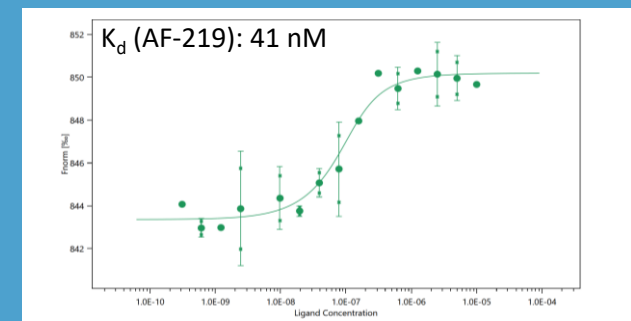
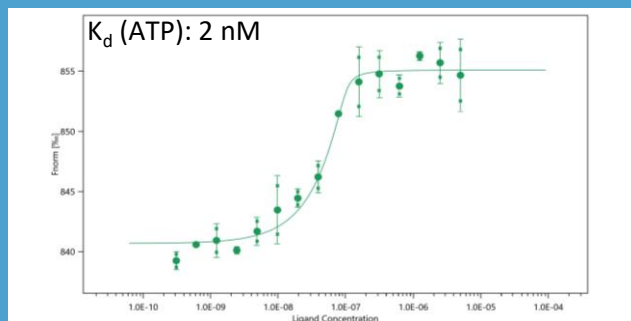
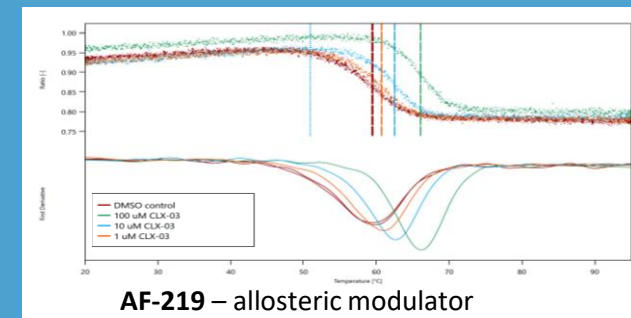
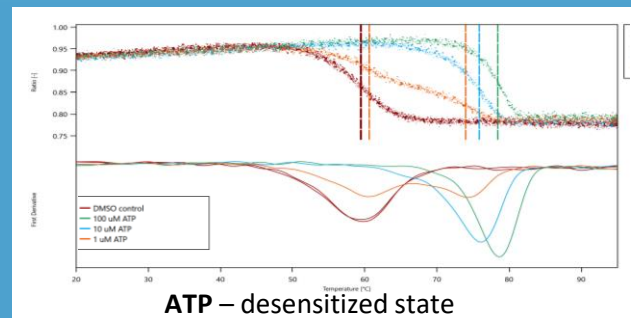
Membrane Proteins

P2X3 – ATP-gated ion channel

Prime Protein Production



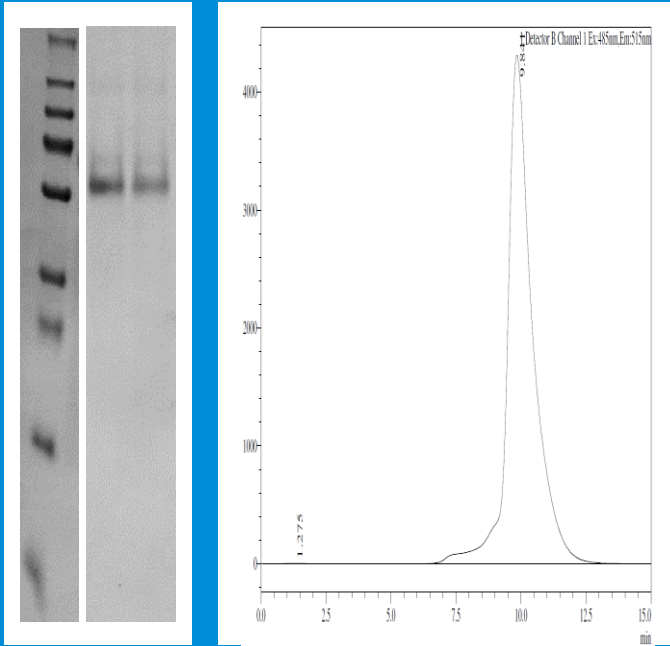
Biophysics – nanoDSF & MST



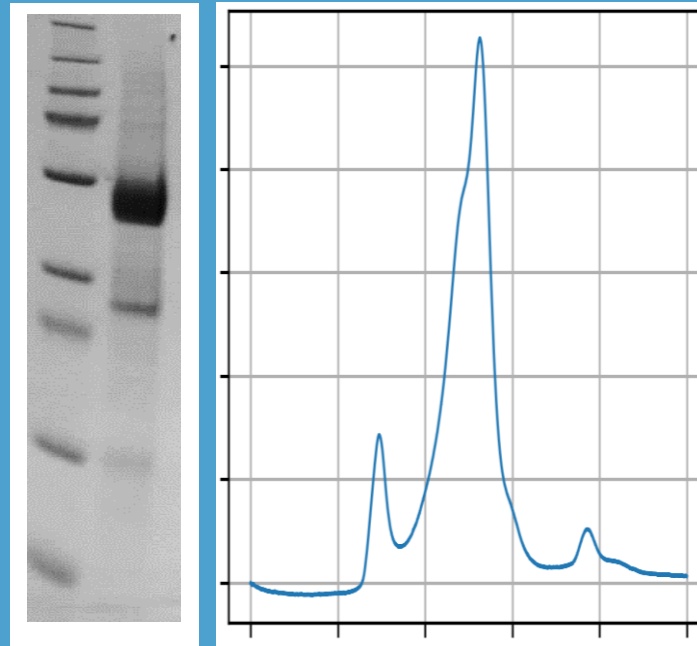
Membrane Proteins

PRIME Protein production

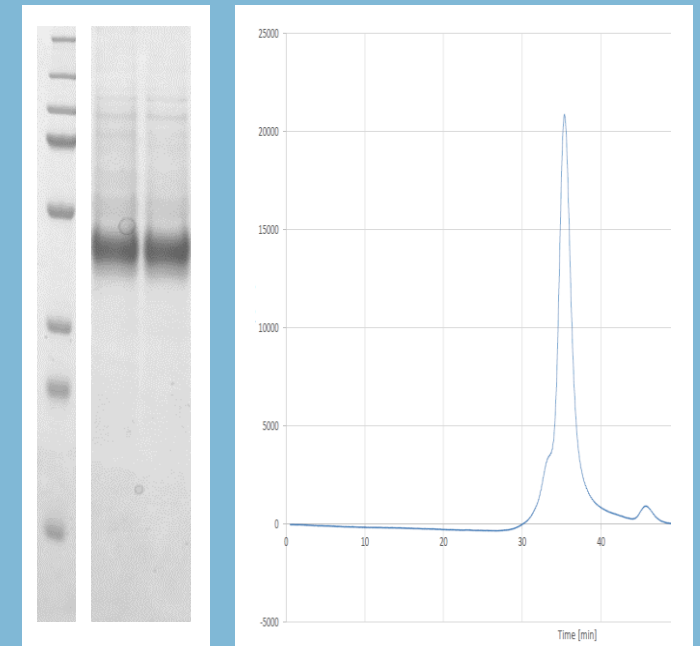
CNR1



GPR40



Glucose Transporter



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Am Klopferspitz 19a
82152 Martinsried
Germany

Contact: Crelux_CR@wuxiapptec.com

www.crelux.com

www.wuxiapptec.com

