

# Antibody discovery platform

- Integrated and cost-effective service of polyclonal and monoclonal antibody (pAb and mAb)
- Anti-drug antibodies (ADA), host cell protein (HCP) antibodies, surrogate antibodies, diagnostic antibodies, therapeutic antibodies
- Antibody drug conjugate services

## Integrated Antibody & Protein Drug Discovery Platform

### Peptide

- Peptides synthesis
- From mg to gram
- From crude to 99% purity
- Conjugation with carrier protein

### Animal Facility

- >30,000 m<sup>2</sup>
- Hosts mouse, rabbit, rat, guinea pig, pig, goat, sheep, dog, monkey, etc.
- AAALAC, OECD, FDA and NMPA certified

### mAb

- Mouse or rat mAb
- HTP automatic screening
- Roller bottle and wave bag culture
- >500 mAbs yearly

### Potential Clinical Apps

- Antibody Hits
- ADC
- Non-GLP production
- Diagnostic reagents and kits

### Bioinformatics

### Peptide or Protein

### Animal Immunization

### pAb or mAb

### Characterization & QC

### Report & Co

### Peptide

- Solubility, immunogenicity, epitope analysis
- Peptide design
- Plasmid design

### Recombinant Proteins

- 3000+ recombinant proteins
- E.coli, insect cell, mammalian cell

### pAb

- >1,500 pAb annually
- Custom pAb from gene ID to Ab in 3 months

### Characterization

- MS, HPLC, BLI, SPR, NanoDSF, DLS
- IHC/ICC, ELISA
- Western blotting, immunoprecipitation
- Confocal IF, flow cytometry
- Epitope mapping, crystallography

## Monoclonal Antibody



Species: Mouse & Rat

Antigen: Small molecule, Peptide, Protein, Nucleic acid, Virus & Cell

Hybridoma: Electronic fusion

Leadtime: 3-4 Months

## Polyclonal Antibody



Species: Mouse, Rat, Guinea pigs, Rabbit, Dog, Pig, Goat, and Monkey

Antigen: Small molecule, Peptide, Protein, Nucleic acid, Virus & Cell

Leadtime: 50 Days

## Recombinant Protein



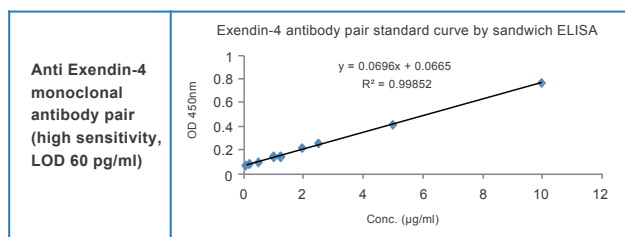
Species: E. coli, Insect cells, Mammalian cell (293 or CHO)

Leadtime: 30 Days

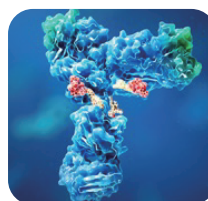
## Product Catalog

Leadtime: 2-3 days

Antibody Drug	Peptide Drug	Payload	Nucleic Acid Drugs
Anti-Humira	Anti-Actemra	Anti-Exenatide	Anti-MMAE
Anti-Avastin	Anti-Keytruda	Anti-GIP	Anti-DM1
Anti-Herceptin	Anti-Xgeva	Anti-Liraglutide	Anti-SN-38
Anti-Erbitux	Anti-Perjeta	Anti-GLP-1	Anti-DXD
Anti-Remicade	Anti-Lucentis		MMAF
Anti-Mabthera	Anti-Eylea		

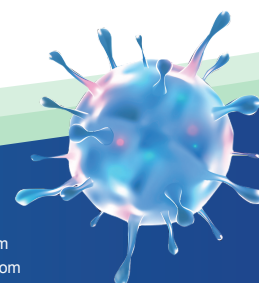


## Antibody Drug Conjugate



### Site Specific Conjugation

- Conjugation by thiols in inter-chain
- Conjugation by mutagenesis
- Conjugation by enzyme



### Contact us

Technical: Pharmacology-BD-Translation@wuxiapptec.com

BD USA: mahnaz\_arjomand@wuxiapptec.com

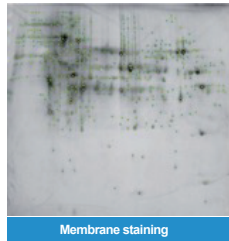
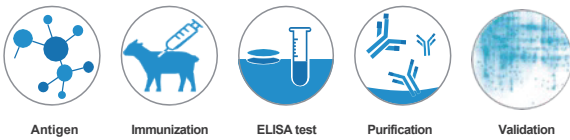
BD EU/UK/Israel: dave\_madge@wuxiapptec.com

BD China: xu\_longji@wuxiapptec.com

BD Japan: fumio\_itoh@wuxiapptec.com

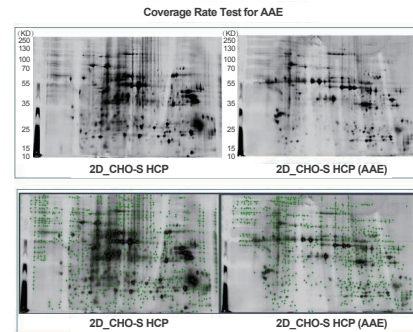
BD Korea: sycho@wuxiapptec.com

## Host Cell Protein(HCP) Antibody, 2D WB or AAE Validation



Proteins detected by 2D gel	671
Proteins detected by WB(Blot with HCP antibody)	608
Proteins detected by the two methods	334
Total proteins	945
Coverage	64%

Species: Goat  
Leadtime: 90 Days for antibody generation  
14 days for 2D WB or AAE validation

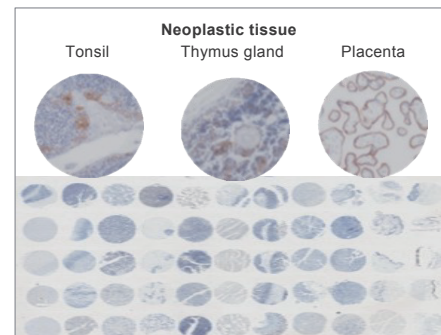
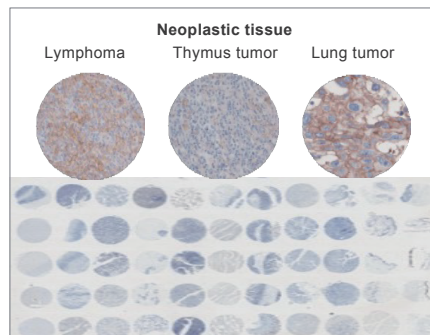
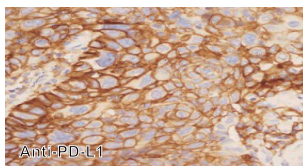


CHO-S HCP protein spots (Gel Stain)	992
CHO-S HCP AAE protein spots (Gel Stain)	821
Coverage rate (AAE)	89.0%

## ELISA , IHC Companion Diagnostic and HCP Kits

Species: Mouse, goat Leadtime: 200 Days

Performance evaluation:  
Specificity, sensitivity, precision, stability

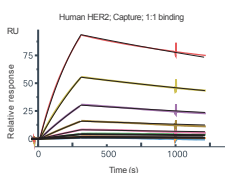


## Characterization & Druggability Analysis



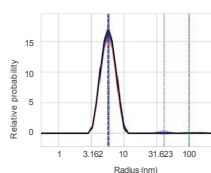
**Surface Plasmon Resonance (SPR)**  
Biacore 8000

SPR/Biacore 8K  
Binding affinity of Her2 to Trastuzumab at SPR assay  
KD : 1.09 nM



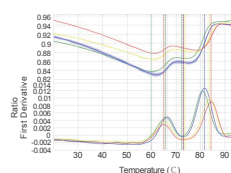
**Nano Differential Scanning Fluorimetry (nanoDSF)**  
Prometheus Panta

DLS results show Highly monodisperse (PDI <0.1) of ADC drug



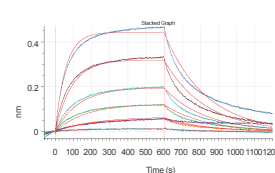
**Dynamic Light Scattering (DLS)**  
Prometheus Panta

NanoDSF  
Label Free Durvalumab Buffer test on Durvalumab thermal stability



**Bio-Layer Interferometry (BLI)**  
Octet RED384

BLI/Octet  
Binding affinity of SLN to PDE3A at BLI assay  
KD : 0.27 uM



**BioAccord LC-MS**

LS-MS  
Detection of ADC drug coupling efficiency and control of DAR

