



## Enzyme Profiling Services for

- > Substrate Identification, Characterization & Optimization
- > Determination of Substrate Specificity
- > Identification of Enzymatic Contaminations

JPT is in possession of a comprehensive tool box to profile enzymes such as **proteases, kinases, phosphatases and methyltransferases** at highest quality standards.

**jpt**

Innovative Peptide Solutions

JPT is a unique partner for elucidating the action of a variety of enzyme classes. Based on our proprietary peptide based technologies ranging from the most powerful peptide library approaches to our peptide microarray platform and our knowledge in developing enzymatic assays JPT has established a profound expertise in enzyme research.

## **Our Tools & Technologies**

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### **Enzyme Substrate Sets**

Several hundred annotated substrates as ready-to-screen peptide collections in 384-well microplates for different enzyme classes.

### **Enzyme Peptide Microarrays**

Peptide microarrays consisting of several thousand of annotated substrates for the respective target enzyme classes.

### **Micro-Scale Peptides**

Tens of thousands of affordable tailor made peptides for systematic optimization of substrates. Take advantage of the lowest custom peptide prices in industry.

### **Validated Assays for Screening Enzymatic Activity**

Solution and solid phase assays for profiling **Protease-, Kinase-, Phosphatase- and Methyltransferase** activities in cell lysates or purified samples.

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## **Your Needs**

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- Identification of substrates for high throughput screening
- Selectivity testing
- Substrate optimization (molecular weight, solubility, assay principle,  $K_{cat}/K_m$ ...)
- Detection of contaminating enzymes in protein samples
- Detection of biomarker activity patterns in lysates

## References

*"Peptide Arrays for Enzyme Profiling "*

**Thiele et al.**, Methods Mol. Biol. (2009)

*"Side Chain Specificity of ADP-Ribosylation by a Sirtuin"*

**Fahie et al.**, FEBS Journal (2009)

*"Diverse Driving Forces Underlie the Invariant Occurrence of the T42A, E139D, I282V and T468M SHP2 Amino Acid Substitutions Causing Noonan and LEOPARD Syndromes"*

**Martinelli et al.**, Human Molecular Genetics (2008)

*"A Fluorogenic Substrate as Quantitative In Vivo Reporter to Determine Protein Expression and Folding of Tobacco Etch Virus Protease in Escherichia Coli"*

**Kraft et al.**, Protein Expr. Purif. (2007)

*"Identification of Candidate Substrates for Ectodomain Shedding by the Metalloprotease-Disintegrin ADAM8"*

**Naus et al.**, Biol. Chem. (2006)

*"High-Content Peptide Microarrays for Deciphering Kinase Specificity and Biology"*

**Schutkowski et al.**, Angew. Chem. Int. Ed. (2004)

*"Target Specificity Analysis of the Abl kinase Using Peptide Microarray Data"*

**Rychlewski et al.**, J. Mol. Biol. (2004)

*"Screening a Combinatorial Peptide Library to Develop a Human Glandular Kallikrein-2 Activated Prodrug as Targeted Therapy for Prostate Cancer"*

**Janssen et al.**, Mol. Cancer Ther. (2004)

*"Processing of the Human Transferrin Receptor at Distinct Positions within the Dstalk Region by Neutrophil Elastase and Cathepsin G"*

**Kaup et al.**, Biol. Chem. (2002)

## Testimonials

*"We were very pleased with how easy it was to do the experiment (with Kinase Substrate Sets) using the equipment we had on hand - for example, we just used our 8-channel micropipette to add the enzyme/ATP mix."*

Betty A. Eipper, PhD, University of Connecticut, Farmington, USA

*"For several years, my group at the Tumor Biology Center has been using JPT's Protease Profiling Tools for analyzing the substrate specificity of tumor-associated proteases as well as for identifying cancer specific protease patterns."*

Felix Kratz, PhD, Clinic for Tumor Biology, Freiburg, Germany





**Discuss your project with us**

**Please fax back to +49-30-6392-5501**

**My field of application is**

- High throughput screening
- Substrate identification
- Substrate optimization
- Selective substrates
- Biomarker discovery
- Enzymatic activities in biol. samples
- Detection of enzymatic contaminations
- Identification of *in vivo* substrates

other: \_\_\_\_\_

**I wish to receive more information about JPT's**

- Kinase profiling tools
- Protease profiling tools
- Phosphatase profiling tools
- Peptide libraries
- Peptide arrays
- Substrate peptides
- Proteomics
- Enzyme profiling services

other/please specify: \_\_\_\_\_

**I want to receive JPT's newsletter**

**May we contact you by phone or mail?**

\_\_\_\_\_  
Name

\_\_\_\_\_  
Inst./Company

\_\_\_\_\_  
Town/Country

\_\_\_\_\_  
Phone Number

\_\_\_\_\_  
Official Email Address



## Find your JPT product at one glance

### Immuno Tools

PepStar™ Microarrays  
PepSpots™ Array Service  
PepMix™  
PepTrack™ Peptide Libraries  
RepliTope™

### Peptides & Arrays

PepStar™ Microarrays  
PepSpots™ Array Service  
PepTrack™ Peptide Libraries  
Custom Peptides  
Macroscale Peptide Sets  
Microscale Peptide Sets  
BioTides™  
Peptide Conjugates

### Proteomics & Enzyme Profiling Tools

SpikeTides™  
Kinase Profiling Tools  
Phosphatase Profiling Tools  
Protease Profiling Tools  
Microscale Peptide Sets  
PepStar™ Microarrays



Innovative Peptide Solutions

JPT Peptide Technologies

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