

## PhosphoSens Sensor Peptides for Continuous Fluorescent Intensity Phosphatase Assays

A Powerful Approach for Understanding Phosphatase and Phosphatase Inhibitor Activity

**Search Below to Match Your Phosphatase With Our Sensor Peptide Substrate**

**Bulk Sensor Peptide:** Designed for higher throughput applications. 1mg is sufficient for ~1,200 assays in a low-volume 384-well plate (10µM sensor peptide in 25µL reaction volume). Available from 1mg to +200mg aliquots. We also offer optimized buffers and reagents (sold separately, refer to Table 3 below).

**Evaluation Kits:** Designed for streamlined technology assessment. Each Evaluation kit enables 96 reactions in a low-volume 384-well plate (10µM sensor peptide in 25µL reaction volume). Includes all assay components (excluding your kinase).

| HGNC<br>(Common) Name                               | HGNC<br>Approved Full Name  | Ser (S)<br>Thr (T)<br>Tyr (Y) | Class or Family | Product<br>Number<br>(Bulk, Kit) | Sensor<br>Peptide<br>MW (g/mol) | Enzyme used in<br>Sensor Peptide<br>Development | Assay<br>Strength* |
|---|---|-------------------------------|-----------------|----------------------------------|---------------------------------|---|--------------------|
| CDC25A  | M-phase inducer phosphatase 1   | Dual (Y)                      | Soluble         | CSKS-AQT0523B<br>CSKS-AQT0523K   | 1189.2                          | SignalChem (C04-20G)                            | W                  |
| CDC25B  | M-phase inducer phosphatase 2   | Dual (Y)                      | Soluble         | CSKS-AQT0523B<br>CSKS-AQT0523K   | 1189.2                          | SignalChem (C04-20BG)                           | W                  |
| CDC25C  | M-phase inducer phosphatase 3   | Dual (Y)                      | Soluble         | CSKS-AQT0523B<br>CSKS-AQT0523K   | 1189.2                          | SignalChem (C04-20CG)                           | W                  |
| DUSP22 (JSP-1, LMW-DSP2, MKPX)                      | Dual specificity protein phosphatase 22                                 | Dual                          | Soluble         | CSKS-AQT0737B<br>CSKS-AQT0737K   | 1557.8                          | SignalChem (D22-20G)                            | S                  |
| DUSP3 (VHR)   | Dual specificity protein phosphatase 3                                  | Dual (Y)                      | Soluble         | CSKS-AQT0264B<br>CSKS-AQT0264K   | 2004.1                          | R&D Systems<br>(1654-VH-050)                    | M                  |
| PHLPP1 (PHLPP, SCOP)                                | PH domain Leucine-Rich Repeat-Containing Protein Phosphatase 1          | S/T                           | Soluble         | CSKS-AQT0481B<br>CSKS-AQT0481K   | 2110.2                          | Academic Lab                                    | M                  |
| PHLPP2 (PHLPL)                                      | PH domain Leucine-Rich Repeat-Containing Protein Phosphatase 2          | S/T                           | Soluble         | CSKS-AQT0481B<br>CSKS-AQT0481K   | 2110.2                          | Academic Lab                                    | M                  |
| PPM1A (PP2Ca, PP2CA)                                | Protein Phosphatase 1A  | S/T                           | Soluble         | CSKS-AQT0267B<br>CSKS-AQT0267K   | 1219.3                          | SignalChem (P02-20G)                            | VS                 |
| PPM1D (WIP1, PP2C-delta)                            | Protein phosphatase 1D  | S/T                           | Soluble         | CSKS-AQT0525B<br>CSKS-AQT0525K   | 2479.5                          | SignalChem (P04-20G)                            | S                  |
| PPM1G (PP2Cg)                                       | Protein Phosphatase 1G  | S/T                           | Soluble         | CSKS-AQT0267B<br>CSKS-AQT0267K   | 1219.3                          | SignalChem (P07-20G)                            | S                  |
| PPM1F (CamKase)                                     | Protein Phosphatase 1F  | S/T                           | Soluble         | CSKS-AQT0523B<br>CSKS-AQT0523K   | 1189.2                          | SignalChem (P06-34G)                            | M                  |
| PPP1CA (PP1A/PPP1A)                                 | Serine/threonine-protein phosphatase PP1-alpha catalytic subunit        | S/T                           | Soluble         | CSKS-AQT0480B<br>CSKS-AQT0480K   | 2212.3                          | BPS (41106)                                     | M                  |
| PPP1CB (PP1B, PPP1B)                                | Serine/threonine-protein phosphatase PP1-alpha catalytic subunit        | S/T                           | Soluble         | CSKS-AQT0523B<br>CSKS-AQT0523K   | 1189.2                          | SignalChem (P14-20G)                            | VS                 |
| PPP2CA (PP2A-α, RP-C)                               | Serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform | S/T                           | Soluble         | CSKS-AQT0523B<br>CSKS-AQT0523K   | 1189.2                          | BPS (30056)                                     | VS                 |
| PPP2CB (PP2Abeta)                                   | Serine/threonine-protein phosphatase 2A catalytic subunit beta isoform  | S/T                           | Soluble         | CSKS-AQT0523B<br>CSKS-AQT0523K   | 1189.2                          | SignalChem (P17-34G)                            | W                  |
| PPP3CA/B (Calcineurin A/B, CNA alpha/beta, CALNA/B) | Protein Phosphatase 3 catalytic subunit alpha/beta                      | S/T                           | Soluble         | CSKS-AQT0670B<br>CSKS-AQT0670K   | 2529.8                          | R&D Systems<br>(3160-CA20)                      | S                  |
| PTPN1 (PTP1B, PTB1B)                                | Tyrosine-protein phosphatase non-receptor type 1                        | Y                             | Soluble         | CSKS-AQT0266B<br>CSKS-AQT0266K   | 2151.8                          | BPS (30010)                                     | VS                 |
| PTPN2 (TCPTP, PTPT)                                 | Tyrosine-protein phosphatase non-receptor type 2                        | Y                             | Soluble         | CSKS-AQT0264B<br>CSKS-AQT0264K   | 2004.1                          | BPS (30013)                                     | VS                 |
| PTPN4 (MEG1)  | Tyrosine-protein phosphatase non-receptor type 4                        | Y                             | Soluble         | CSKS-AQT0737B<br>CSKS-AQT0737K   | 1557.8                          | BPS (30015)                                     | VS                 |
| PTPN5 (STEP)  | Tyrosine-protein phosphatase non-receptor type 5                        | Y                             | Soluble         | CSKS-AQT0664B<br>CSKS-AQT0664K   | 1621.6                          | Academic Lab                                    | M                  |
| PTPN6 (SHP-1, PTP-1C)                               | Tyrosine-protein phosphatase non-receptor type 6                        | Y                             | Soluble         | CSKS-AQT0737B<br>CSKS-AQT0737K   | 1557.8                          | BPS (100342)                                    | VS                 |
| PTPN7 (HEPTP, LC-PTP)                               | Tyrosine-protein phosphatase non-receptor type 7                        | Y                             | Soluble         | CSKS-AQT0772B<br>CSKS-AQT0772K   | 1511.5                          | SignalChem (P34-20G)                            | VS                 |
| PTPN9 (MEG2)  | Tyrosine-protein phosphatase non-receptor type 9                        | Y                             | Soluble         | CSKS-AQT0737B<br>CSKS-AQT0737K   | 1557.8                          | BPS (30020)                                     | VS                 |
| PTPN11 (SHP-2, PTP2C, PTP1D)                        | Tyrosine-protein phosphatase non-receptor type 11                       | Y                             | Soluble         | CSKS-AQT0737B<br>CSKS-AQT0737K   | 1557.8                          | BPS (30022)                                     | VS                 |
| PTPN12 (PTP-PEST, PTPG1)                            | Tyrosine-protein phosphatase non-receptor type 12                       | Y                             | Soluble         | CSKS-AQT0737B<br>CSKS-AQT0737K   | 1557.8                          | BPS (30023)                                     | VS                 |
| PTPN13 (FAP-1, PTP-BAS, PTP-E1, PNP1)               | Tyrosine-protein phosphatase non-receptor type 13                       | Y                             | Soluble         | CSKS-AQT0737B<br>CSKS-AQT0737K   | 1557.8                          | SignalChem (P40-21G)                            | VS                 |

| HGNC (Common) Name                   | HGNC Approved Full Name                            | Ser (S)<br>Thr (T)<br>Tyr (Y) | Class or Family | Product Number (Bulk, Kit)     | Sensor Peptide MW (g/mol) | Enzyme used in Sensor Peptide Development | Assay Strength* |
|--------------------------------------|--|-------------------------------|-----------------|--------------------------------|---------------------------|---|-----------------|
| PTPRA (R-PTP-alpha, PTPA, LRP)       | Receptor-type tyrosine-protein phosphatase alpha   | Y                             | Receptor        | CSKS-AQT0667B<br>CSKS-AQT0667K | 2465.4                    | SignalChem (P48-21G)                      | VS              |
| PTPRB (R-PTP-beta, VE-PTP)           | Receptor-type tyrosine-protein phosphatase beta    | Y                             | Receptor        | CSKS-AQT0667B<br>CSKS-AQT0667K | 2465.4                    | SignalChem (P49-21G)                      | M               |
| PTPRC (L-CA, CD45, T200)             | Receptor-type tyrosine-protein phosphatase C       | Y                             | Receptor        | CSKS-AQT0630B<br>CSKS-AQT0630K | 1280.3                    | BPS (30044)                               | VS              |
| PTPRE (R-PTP-epsilon)                | Receptor-type tyrosine-protein phosphatase epsilon | Y                             | Receptor        | CSKS-AQT0667B<br>CSKS-AQT0667K | 2465.4                    | SignalChem (P52-21G)                      | S               |
| PTPRF (LAR)                          | Receptor-type tyrosine-protein phosphatase F       | Y                             | Receptor        | CSKS-AQT0737B<br>CSKS-AQT0737K | 1557.8                    | SignalChem (P53-21G)                      | VS              |
| PTPRG (R-PTP-gamma)                  | Receptor-type tyrosine-protein phosphatase gamma   | Y                             | Receptor        | CSKS-AQT0667B<br>CSKS-AQT0667K | 2465.4                    | BPS (30047)                               | VS              |
| PTPRJ (R-PTP-eta, DEP1, CD148)       | Receptor-type tyrosine-protein phosphatase eta     | Y                             | Receptor        | CSKS-AQT0737B<br>CSKS-AQT0737K | 1557.8                    | SignalChem (P56-21G)                      | VS              |
| PTPRM (PTP $\mu$ , PTPRL1, R-PTP-mu) | Receptor-type tyrosine-protein phosphatase mu      | Y                             | Receptor        | CSKS-AQT0737B<br>CSKS-AQT0737K | 1557.8                    | BPS (30053)                               | VS              |
| PTPRS (R-PTP-sigma)                  | Receptor-type tyrosine-protein phosphatase S       | Y                             | Receptor        | CSKS-AQT0737B<br>CSKS-AQT0737K | 1557.8                    | SignalChem (P64-21G)                      | VS              |

Table 1.

| Total Number of PhosphoSens Continuous FI Kinase Assays |
|---|
| Total Number of Assays: 35*                             |

\*Please inquire if your target is not listed in the table above.

Table 2.

| Definition of PhosphoSens Sensor Peptide Assay Strength                            |                              |                              |                                     |
|--|------------------------------|------------------------------|-------------------------------------|
| Continuous (FI) Assay strength is defined by Initial Reaction Rate (RFU/pmole/min) |                              |                              |                                     |
| <u>Very Strong (VS)</u><br>>1,000  | <u>Strong (S)</u><br>300-999 | <u>Medium (M)</u><br>100-299 | <u>Weak (W)</u><br><del>30-99</del> |

Table 3.

| PhosphoSens Buffers and Reagents |                             |  |        |
|----------------------------------|-----------------------------|--|--------|
| Product Number                   | Component                   | Description  | Volume |
| AQT100XATP                       | ATP solution, 100X          | 100mM ATP in nuclease-free water   | 1.5mL  |
| AQT1000XDTT                      | DTT solution, 1000X         | 1M DTT in nuclease-free water  | 0.15mL |
| AQT10XERB                        | Enzyme Reaction Buffer, 10X | 500mM HEPES, pH 7.5, 0.1% Brij-35, 100mM MgCl <sub>2</sub>                   | 15mL   |
| AQT1XEDB                         | Enzyme Dilution Buffer, 1X  | 20mM HEPES, pH 7.5, 0.01% Brij-35, 5% Glycerol, 1 mg/mL Bovine Serum Albumin | 35mL   |
| AQT1000XEGTA                     | EGTA solution, 1000X        | 0.55M EGTA in 2M NaOH  | 0.15mL |