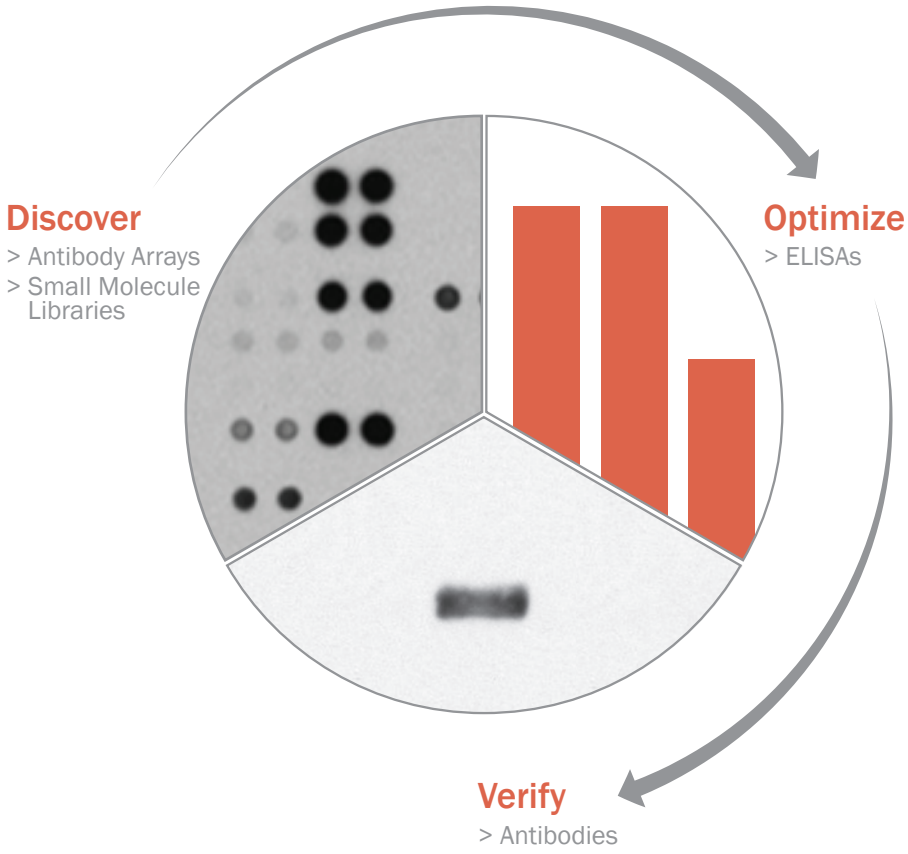
Signal Transduction

Tools to Discover, Optimize, Verify



LIFE SCIENCE BRANDS

R&D systems NOVUS BIOLOGICALS TOCRIS

Quick Guide

Discover

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Verify

Product Listings

Discover What You Might Be Missing

Unexpected, interesting results can be missed when only a subset of proteins within a given family or signaling pathway is analyzed using standard Western blots. Proteome Profiler™ Antibody Arrays allow you to analyze the expression levels or phosphorylation status of many proteins simultaneously, an approach that could increase your chances of discovering a novel pathway or cellular response.

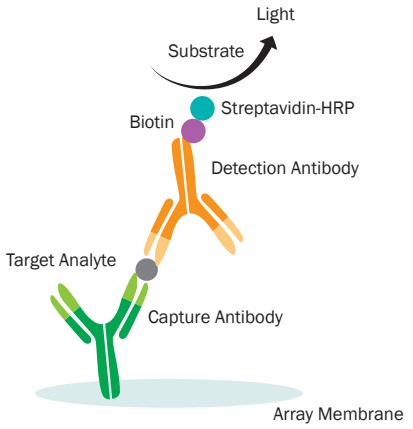
Proteome Profiler Antibody Arrays

Proteome Profiler membrane-based antibody arrays consist of capture antibodies specific for up to 119 analytes spotted in duplicate on a nitrocellulose membrane. Each array is designed to analyze a particular protein family or cellular process. Comprehensive in scope, the data generated from each of these arrays can uncover unexpected cellular responses, such as crosstalk between signaling pathways or off-target pharmacological effects. The arrays also eliminate the time-consuming steps of gel electrophoresis and protein transfer that are necessary when performing a Western blot. In addition, the arrays require no specialized equipment. If you can collect data from a Western blot, you have the equipment to run a membrane-based array experiment.

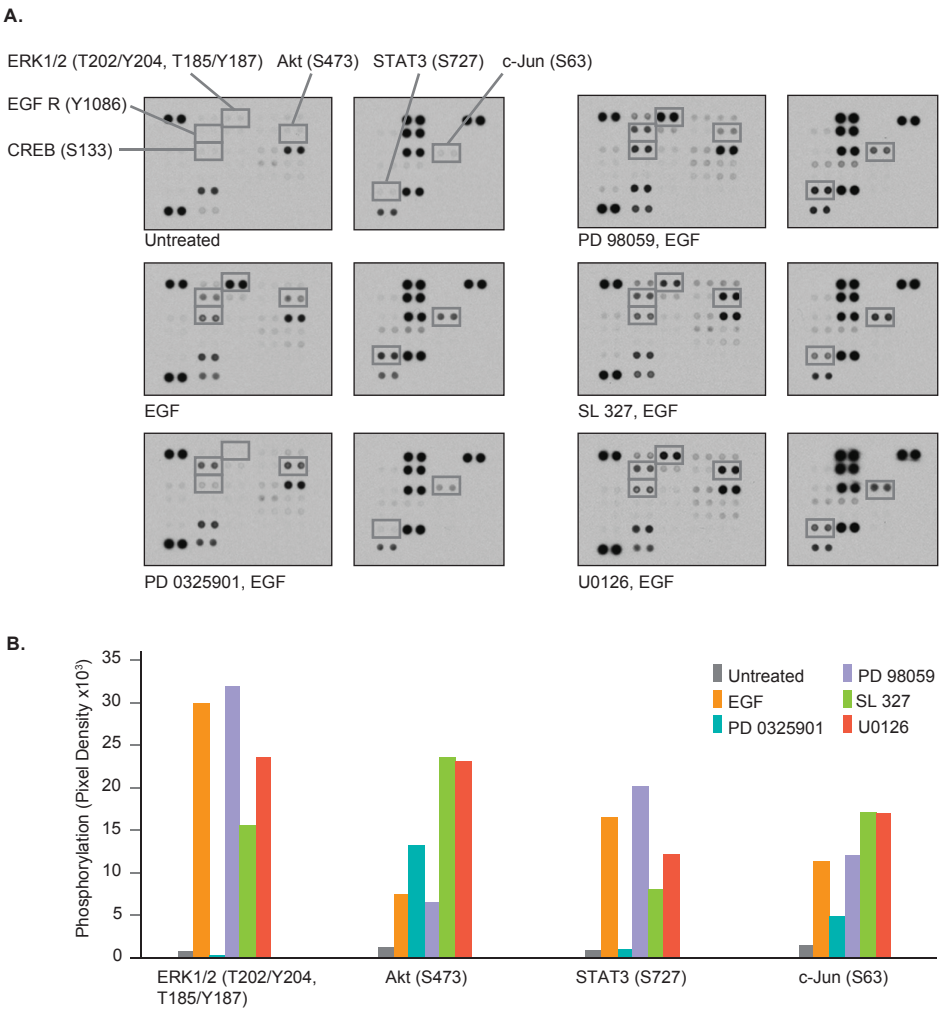
Features

- Hundreds of citations in primary literature
- Ideal for visualizing signaling crosstalk
- Easier to perform than a Western blot
- Hands-on time of 3 hours

Assay Principle



Membrane-based Antibody Array Assay Principle. Antibodies immobilized on nitrocellulose membranes are used to capture specific proteins from cell lysates. Target proteins are detected using a cocktail of biotinylated detection antibodies and Streptavidin-HRP, or an HRP-conjugated pan anti-Phospho-Tyrosine antibody. Bound analytes are visualized with chemiluminescence.



Induction and Inhibition of Kinase Phosphorylation in T47D Cells. The T47D human breast cancer cell line was untreated, treated with 100 ng/mL Recombinant Human EGF (R&D Systems; Catalog # 236-EG) for 15 minutes, or EGF following a 2 hour pretreatment with the MEK inhibitors PD 0325901 (10 µM; Tocris; Catalog # 4192), PD 98059 (20 µM; Tocris; Catalog #1213), SL 327 (10 µM; Tocris; Catalog # 1969), or U0126 (10 µM; Tocris; Catalog # 1144). The phosphorylation status was determined using the Proteome Profiler Human Phospho-Kinase Array (R&D Systems; Catalog # ARY003B). Membranes were exposed to X-ray film (**A**) and histograms were generated from pixel density measurements (**B**).

Tocriscreen

Tocriscreen collections are unique small molecule libraries, designed for screening based on chemical genetics, chemical biology, receptor de-orphaning, target validation, or drug re-profiling. Comprised of biologically active compounds selected from the Tocris catalog, Tocriscreen collections provide wide coverage of the most important targets covered in biochemical and cellular screening assays. Used in both high-throughput and high content screening, Tocriscreen collections provide an indispensable starting point for modern drug discovery.

The libraries are available pre-dissolved in DMSO, and include compounds targeting GPCRs, kinases, ion channels, nuclear receptors, transporters and stem cell biology. Many of the compounds are unavailable elsewhere.

Features

- All compounds are biologically active
- Full chemical and biological data available
- Many compounds are unique to Tocris
- Exceptional purity
- Guaranteed resupply of compounds

Tocriscreen™ Featured Collections

Tocriscreen Kinase Inhibitor Toolbox (Tocris; Catalog # 3514)
80 kinase inhibitors supplied pre-dissolved in DMSO (250 µL 10 mM solutions) Includes the kinase inhibitors U0126 (Catalog # 1144), PD 98059 (Catalog # 1213) and Iressa (Catalog # 3000).
Tocriscreen Total (Tocris; Catalog # 2884)
1120 biologically active compounds pre-dissolved in DMSO (250 µL 10 mM solutions) Includes compounds targeting 5-HT, glutamate, acetylcholine and adrenergic receptors; inhibitors of PDE, PKC and ROCK; and a number of ion channel blockers.

Citations

1. Beacham, D.W. *et al.* (2010) Cell-based potassium ion channel screening using the FluxORTM assay. J. Biomol. Screen. **15**:441-6.
2. Hattori, H. *et al.* (2010) Small-molecule screen identifies reactive oxygen species as key regulators of neutrophil chemotaxis. Proc. Natl. Acad. Sci. USA **107**:3546-51.
3. Li, Y. *et al.* (2011) Generation of iPSCs from mouse fibroblasts with a single gene, Oct4, and small molecules. Cell Res. **21**:196-204.
4. Hermanson, S.B. *et al.* (2012) Screening for novel LRRK2 inhibitors using a high-throughput TR-FRET cellular assay for LRRK2 Ser935 phosphorylation. PLoS One **7**:e43580.
5. Moujalled, *et al.* (2013) Kinase inhibitor screening identifies cyclin-dependent kinases and glycogen synthase kinase 3 as potential modulators of TDP-43 cytosolic accumulation during cell stress. PLoS One **8**:e67433.
6. Thomson, G. *et al.* (2013) Generation of assays and antibodies to facilitate the study of human 5'-tyrosyl DNA phosphodiesterase. Anal. Biochem. **436**:145-50.

Optimize Experimental Conditions Faster with ELISAs

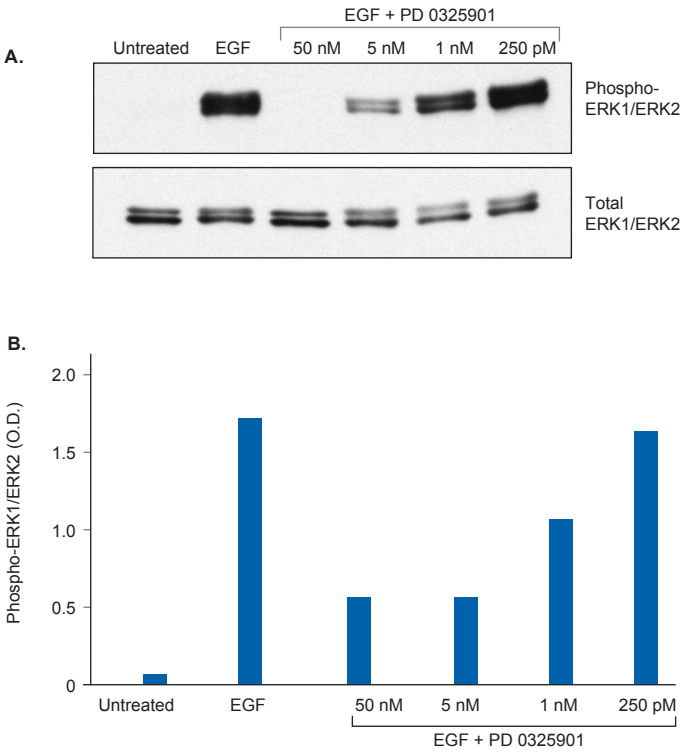
The Surveyor™ IC (Intracellular) ELISA Kits, DuoSet® IC ELISA Development Systems, and Cell-Based ELISA Kits each provide as much data as do approximately eight individual Western blots. More important, the data obtained from our ELISA assays exhibit excellent correlation with results from Western blots performed in parallel. These ELISA-based formats provide a more efficient way to optimize your experimental conditions and clarify the best way forward.

DuoSet IC ELISA Development Systems

DuoSet IC ELISA Development Systems offer an economical alternative to complete Surveyor IC ELISA Kits. They contain the components required for developing an assay, including capture and detection antibodies, protein standard or control, and Streptavidin-HRP. Each DuoSet IC ELISA Development System undergoes an extensive validation process to ensure specificity, minimizing the time required to perform a successful assay.

Features

- High sensitivity – requires small sample volume
- Economical
- Flexible format
- Quantitative without image software analysis
- Adaptable to high-throughput applications



Quantification of Phospho-ERK1/ERK2 in T47D Cells. The T47D human breast cancer cell line was treated with the indicated concentrations of PD 0325901 (Tocris; Catalog # 4192) for 2 hours, followed by treatment with 100 ng/mL Recombinant Human EGF (R&D Systems; Catalog # 236-EG) for 5 minutes. The levels of phospho-ERK1 (T202/Y204)/ERK2 (T185/Y187) were detected by Western blot (**A**) and quantified using the Phospho-ERK1 (T202/Y204)/ERK2 (T185/Y187) DuoSet IC ELISA Development System (R&D Systems; Catalog # DYC1018B) (**B**).

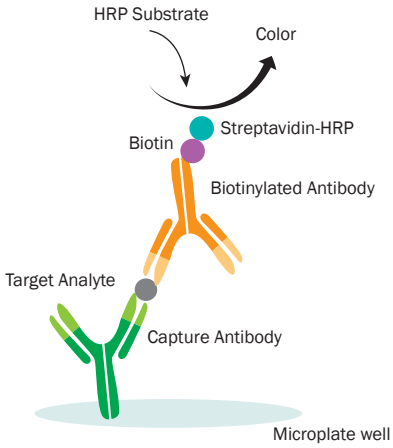
Surveyor IC ELISA Kits

Complete kits using a 96-well microplate format, Surveyor IC ELISAs provide all the components necessary for measuring the levels of total or phosphorylated proteins. Protein levels are easily quantified using the calibrated standard included in each kit, and the sensitivity of the assay permits the use of small sample volumes.

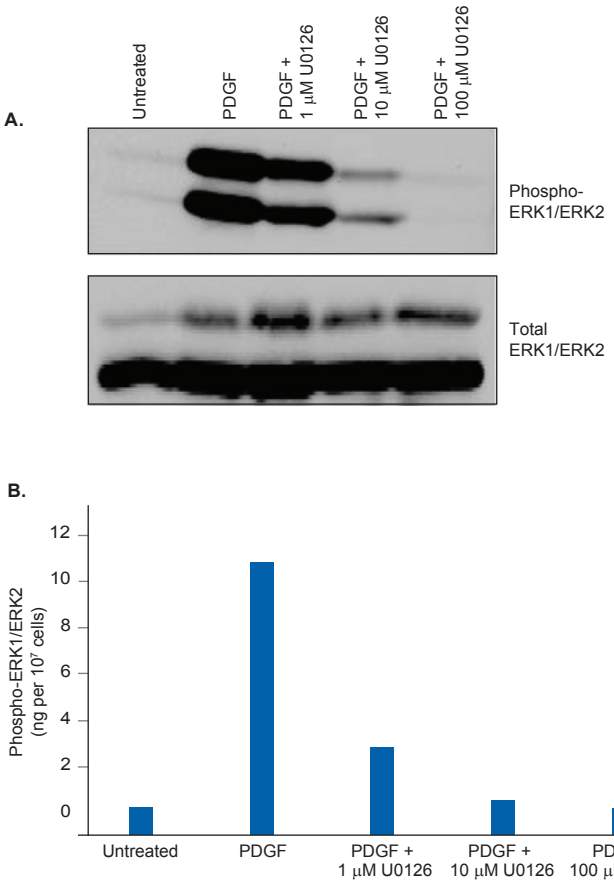
Features

- Fully validated, complete kits
- High sensitivity – requires small sample volume
- Quantitative without image software analysis
- Adaptable to high-throughput applications

Assay Principle



Sandwich Immunoassay Principle. An immobilized antibody specific for the protein of interest is used to capture the protein from cell lysates. After unbound materials are washed away, a biotinylated detection antibody and Streptavidin-HRP are used to quantify the capture protein.



Quantification of Phospho-ERK1/ERK2 in NIH-3T3 Cells. NIH-3T3 mouse embryonic fibroblast cells were treated with 100 ng/mL of Human PDGF (R&D Systems; Catalog # 120-HD) for ten minutes, with or without U0126 (Tocris; Catalog # 1144). The levels of phospho-ERK1 (T202/Y204)/ERK2 (T185/Y187) were detected by Western blot (**A**) and quantified using the Phospho-ERK1 (T202/Y204)/ERK2 (T185/Y187) Surveyor IC Kit (R&D Systems; Catalog # SUV1018B) (**B**).

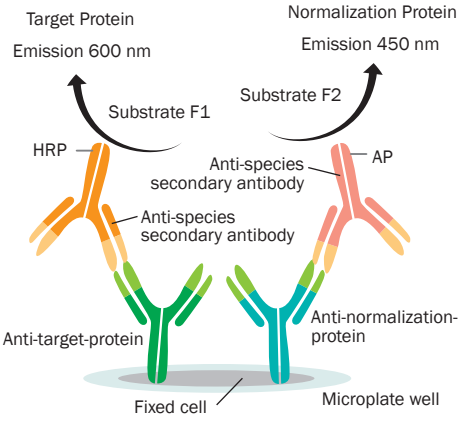
Cell-Based ELISA Kits

Cell-Based ELISAs are complete kits that permit the simultaneous detection of two proteins in the same microplate well without requiring lysate preparation. These kits come in two formats. Phospho-protein kits contain antibodies to measure both the phosphorylated and the total protein, while total protein kits contain antibodies to both the protein of interest and a housekeeping protein. Both formats allow for the normalization of the target protein in each well to account for well-to-well variation.

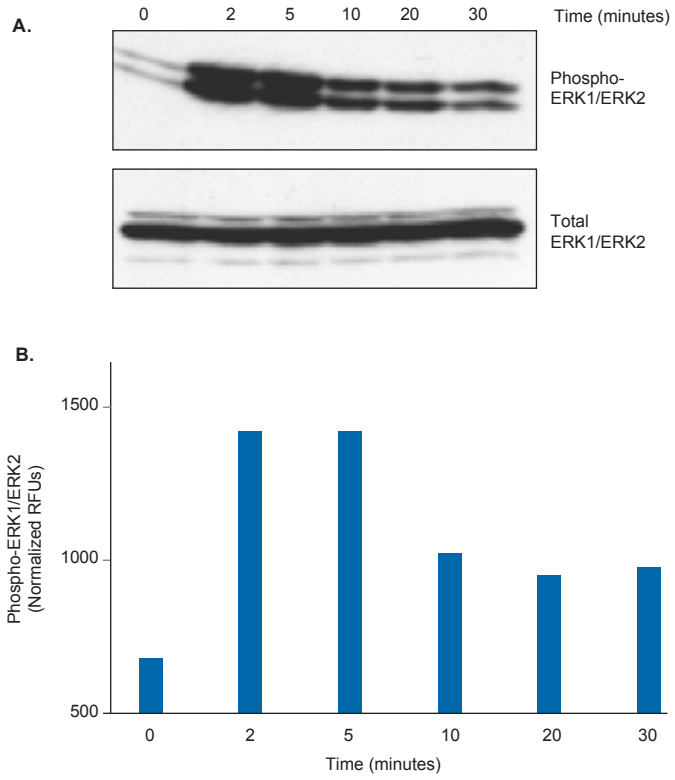
Features

- Obtain data from intact cells
- Utilize with either adherent or suspension cells
- Measure the levels of phosphorylated and total protein simultaneously in the same well
- Culture cells and perform the assay in the same well
- Begin with as few as 10,000 cells per well

Assay Principle



Cell-Based ELISA Assay Principle. Cells are treated, fixed, permeabilized, and subsequently incubated with two primary antibodies derived from different species. One is specific for the target protein and one serves as a normalization antibody. Two species-specific secondary antibodies labeled with either horseradish peroxidase (HRP) or alkaline phosphatase (AP), and two spectrally distinct fluorogenic substrates for HRP and AP are used to detect both proteins in the same well. Normalizing the fluorescence signal derived from the target protein to that of the normalization protein makes it easy to account for well-to-well variation.



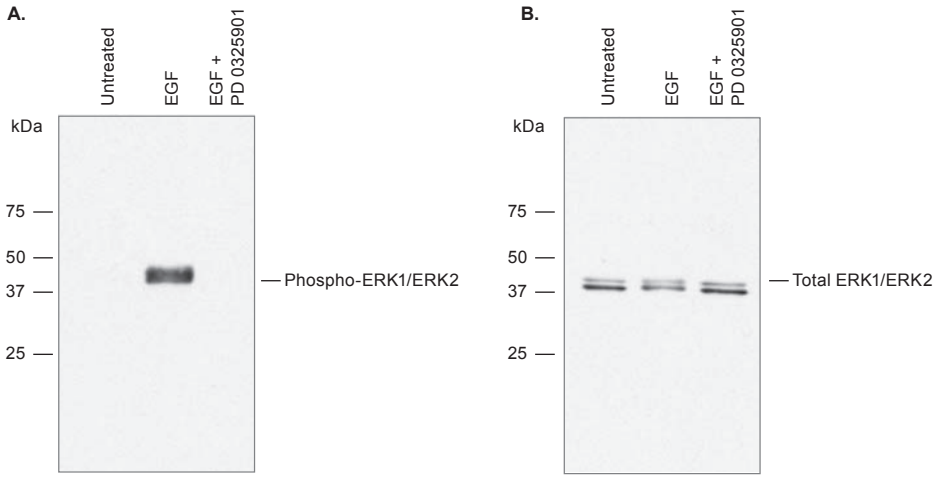
Measurement of Phospho-ERK1/ERK2 in A431 Cells. A431 human epithelial carcinoma cells were treated with Recombinant Human EGF (R&D Systems; Catalog # 236-EG) for the indicated times. Phospho-ERK1 (T202/Y204)/ERK2 (T185/Y187) and total ERK1/ERK2 levels were detected by Western blot (**A**) and, after fixation of cells in the wells, phospho-ERK1 (T202/Y204)/ERK2 (T185/Y187) levels were determined and normalized to total ERK1/ERK2 levels in the same well using the Phospho-ERK1 (T202/Y204)/ERK2 (T185/Y187) Cell-Based ELISA Kit (R&D Systems; Catalog # KCB1018) (**B**).

Verify Results with High-Performance Antibodies

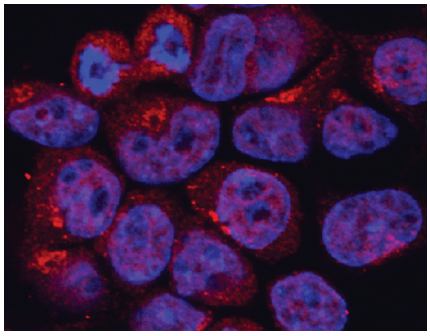
With our selection of over 155,000 Novus Biologicals and R&D Systems antibodies, you will be able to find what you need. Additionally, because our antibodies are 100% guaranteed to work in the application and species listed you can always be confident in what you find.

Features

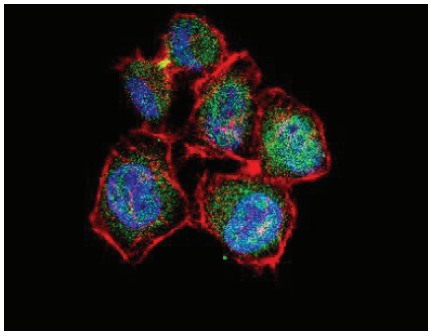
- Largest offering on the market
- Hundreds of unique clones developed in-house
- Over 15,000 antibodies specific for unique target molecules
- Over 200,000 data images and 2,000 customer reviews
- Over 50,000 conjugated primaries to 3,000 unique target molecules



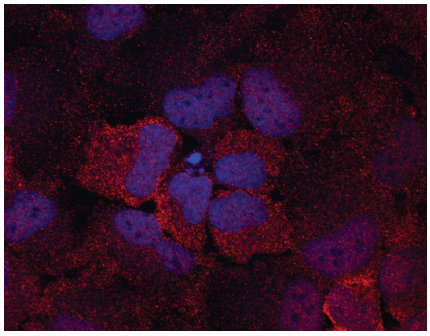
Inhibition of ERK1/ERK2 Phosphorylation in T47D Cells. The T47D human breast cancer cell line was treated with PD 0325901 (50 nM; Tocris; Catalog # 4192) for 2 hours, followed by treatment with 100 ng/mL Recombinant Human EGF (R&D Systems; Catalog # 236-EG) for 5 minutes. The levels of phospho-ERK1 (T202/Y204)/ERK2 (T185/Y187) (**A**) and total ERK1/ERK2 (**B**) were detected by Western blot using the Anti-Human/Mouse/Rat Phospho-ERK1 (T202/Y204)/ERK2 (T185/Y187) Affinity-Purified Polyclonal Antibody (R&D Systems; Catalog # AF1018) and the Anti-Human/Mouse/Rat ERK1/ERK2 Monoclonal Antibody (R&D Systems; Catalog # MAB15761), respectively.



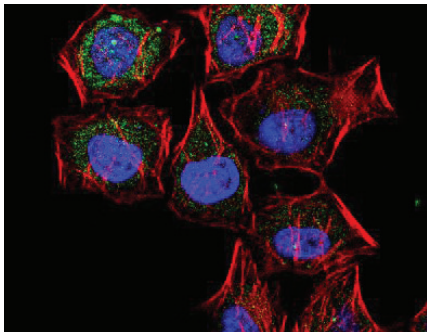
MEKK2 in 293T Cells. MEKK2 was detected in immersion fixed 293T human embryonic kidney cells using a Mouse Anti-Human/Mouse/Rat MEKK2 Monoclonal Antibody (Catalog # MAB7128). Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). *All cited reagents are from R&D Systems.*



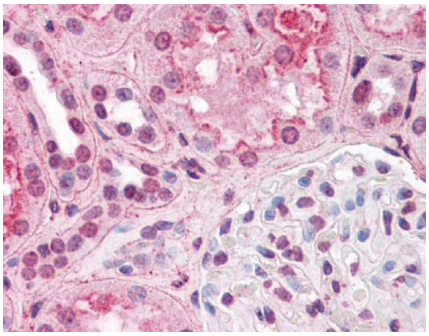
Survivin in HeLa Cells. Survivin was detected in HeLa cells using a Rabbit Anti-Human/Mouse/Rat/Canine/Feline/Guinea Pig/Hamster Survivin Antibody (Novus Biologicals; Catalog # NB500-201). Cells were stained using an Alexa Fluor® 488-conjugated goat anti-rabbit IgG secondary antibody (green). Actin filaments were labeled with Alexa Fluor 568 phalloidin (red). The nuclei were counterstained with DAPI (blue).



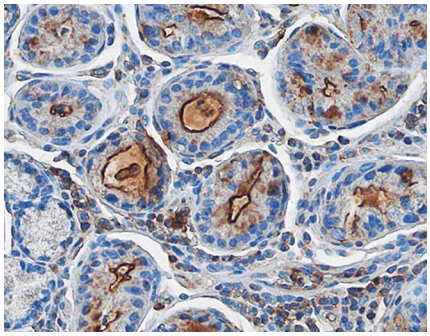
TSC2 in HeLa Human Cell Line. TSC2 was detected in immersion fixed HeLa human cervical epithelial carcinoma cells using a Human TSC2 Monoclonal Antibody (Catalog # MAB40401). Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to the cytoplasm. *All cited reagents are from R&D Systems.*



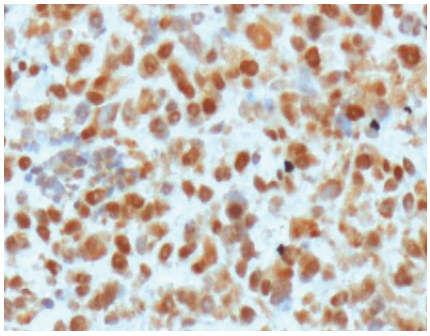
LC3B in HeLa Cells. LC3B was detected in HeLa cells using a Rabbit Anti-Human/Mouse/Rat/Bovine/Canine/Primate/Zebrafish LC3B Antigen Affinity-Purified Polyclonal Antibody (Novus Biologicals; Catalog # NB600-1384). Cells were stained using an Alexa Fluor 488-conjugated goat anti-rabbit IgG secondary antibody (green). Actin filaments were labeled with Alexa Fluor 568 phalloidin (red). The nuclei were counterstained with DAPI (blue).



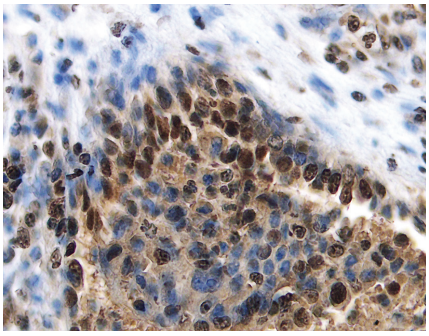
HIF-1α in Human Kidney. HIF-1α was detected in human kidney tissue using a Mouse Anti-Human/Mouse/Rat/Bovine/Ferret/Porcine/Primate/Rabbit/Sheep/Xenopus/Yeast HIF-1α Monoclonal Antibody (Novus Biologicals; Catalog # NB100-105). The renal tubular epithelium showed moderate membranous, cytoplasmic and nuclear staining, and glomeruli showed faint to moderate nuclear staining.



Gastrokine 1 in Human Stomach. Gastrokine 1 was detected in immersion fixed paraffin-embedded sections of human stomach using Sheep Anti-Mouse Gastrokine 1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7287). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to islets. *All cited reagents are from R&D Systems.*



APE1 in Human Breast Cancer Xenograft Tissue. APE1 was detected in human breast cancer xenograft tissue using a Mouse Anti-Human/Mouse/Rat/Primate APE1 Monoclonal Antibody (Novus Biologicals; Catalog # NB100-116). The tissue was stained with DAB (brown) and counterstained with hematoxylin (blue).



Histone H2AX in Human Breast Cancer Tissue. Histone H2AX was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using a Human Phospho-Histone H2AX (S139) Antigen Affinity-Purified Polyclonal Antibody (Catalog # AF2288. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Rabbit HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS005) and counterstained with hematoxylin (blue). *All cited reagents are from R&D Systems.*

Products

Proteome Profiler Membrane-based Antibody Arrays

Product	Measures	R&D Systems; Catalog #
Human Angiogenesis Antibody Array Kit	55 angiogenesis molecules	ARY007
Activin A, ADAMTS1, Angiogenin, Angiopoietin-1, Angiopoietin-2, Angiostatin/Plasminogen, Amphiregulin, Artemin, CCL2/MCP-1, CCL3/MIP-1α, Coagulation Factor III/TF, CXCL4 /PF4, CXCL8/IL-8, CXCL16, DPPIV, EGF, EG-VEGF, Endoglin, Endostatin/Collagen XVIII, Endothelin-1, FGF acidic, FGF basic, FGF-4, FGF-7, GDNF, GM-CSF, HB-EGF, HGF, IGFBP-1, IGFBP-2, IGFBP-3, IL-1β, LAP (TGF-β1), Leptin, MMP-8, MMP-9, NRG1-β1, Pentraxin 3, PD-ECGF, PDGF-AA, PDGF-AB/BB, Persephin, PlGF, Prolactin, Serpin B5, Serpin E1/PAI-1, Serpin F1/PEDF, TIMP-1, TIMP-4, Thrombospondin-1, Thrombospondin-2, uPA, Vasohibin, VEGF, VEGF-C		
Human Apoptosis Antibody Array Kit	35 apoptosis molecules	ARY009
Bad, Bax, Bcl-2, Bcl-x, Pro-Caspase-3, Cleaved Caspase-3, Catalase, Claspin, Clusterin, Cytochrome c, FADD, Fas/TNFRSF6, HIF-1α, HO-1/HMOX1/HSP32, HO-2/HMOX2, HSP27, HSP60, HSP70, HTRA2/Omi, cIAP-1, cIAP-2, Livin, p21/CIP1, p27/Kip1, PON2, Phospho-p53 (S15), Phospho-p53 (S46), Phospho-p53 (S392), Phospho-Rad17 (S635), SMAC/Diablo, Survivin, TNF RI/TNFRSF1A, TRAIL R1/DR4, TRAIL R2/DR5, XIAP		
Human Cell Stress Antibody Array Kit	26 cell stress molecules	ARY018
ADAMTS1, Bcl-2, Carbonic Anhydrase IX, Cited-2, COX-2, Cytochrome c, Dkk-4, FABP1/L-FABP, HIF-1α, HIF-2α, Phospho-HSP27 (S78/S82), HSP60, HSP70, IDO, Phospho-JNK pan (T183/Y185), NFκB1, p21/CIP, p27/KIP, Phospho-p38α (T180/Y182), Phospho-p53 (S46), PON1, PON2, PON3, Thioredoxin-1, SIRT2, SOD2		
Human Chemokine Antibody Array Kit	31 chemokines	ARY017
CCL1/I-309, CCL2/MCP-1, CCL3/CCL4 (MIP-1α/MIP-1β), CCL5/RANTES, CCL7/MCP-3, CCL14/HCC-1/HCC-3, CCL15/MIP-1δ/LKN-1, CCL17/TARC, CCL18/PARC, CCL19/MIP-3β, CCL20/MIP-3α, CCL21/6Ckine, CCL22/MDC, CCL26/Eotaxin-3, CCL28, Chemerin, CX3CL1/Fractalkine, CXCL1/GROα, CXCL4/PF4, CXCL5/ENA-78, CXCL7/NAP-2, CXCL8/IL-8, CXCL9/MIG, CXCL10/IP-10, CXCL11/I-TAC, CXCL12/SDF-1, CXCL16, CXCL17/VCC-1, IL-16, Midkine, XCL1/Lymphotactin		
Human Cytokine Antibody Array Kit	36 cytokines	ARY005
C5a, CCL1/I-309, CCL2/MCP-1, CCL3/MIP-1α, CCL4/MIP-1β, CCL5/RANTES, CD40 Ligand, CXCL1/GROα, CXCL8/IL-8, CXCL10/IP-10, CXCL11/I-TAC, CXCL12/SDF-1, G-CSF, GM-CSF, ICAM-1, IFN-γ, IL-1α, IL-1β, IL-1ra, IL-2, IL-4, IL-5, IL-6, IL-10, IL-12 p70, IL-13, IL-16, IL-17, IL-17E, IL-23, IL-27, IL-32α, MIF, Serpin E1/PAI-1, TNF-α, TREM-1		
Human XL Cytokine Antibody Array Kit	102 cytokines	ARY022
Adiponectin/Acrp30, Aggrecan, Angiogenin, Angiopoietin-1, Angiopoietin-2, BAFF/BLyS/TNFSF13B, BDNF, CD14, CD30, CD40 ligand, Chitinase 3-like 1, Complement Component C5/C5a, Complement Factor D, C-Reactive Protein/CRP, Cripto-1, Cystatin C, Dkk-1, DPPIV/CD26, EGF, CXCL5/ENA-78, Endoglin/CD105, EMMPRIN, Fas Ligand, FGF basic, KGF/FGF-7 FGF-19, Flt-3 Ligand, G-CSF, GDF-15, GM-CSF, CXCL1/GROα, Growth Hormone (GH), HGF, ICAM-1/CD54, IFN-γ, IGFBP-2, IGFBP-3, IL-1α/IL-1F1, IL-1 β/IL-1F2, IL-1ra/IL-1F3, IL-2, IL-3, IL-4, IL-5, IL-6, IL-8, IL-10, IL-11, IL-12 p70,IL-13, IL-15, IL-16, IL-17A, IL-18 BPa, IL-19, IL-22, IL-23, IL-24, IL-27, IL-31, IL-32 α/β/γ, IL-33, IL-34, CXCL10/IP-10, CXCL11/I-TAC, Kallikrein 3/PSA, Leptin, LIF, Lipocalin-2/NGAL, CCL2/MCP-1, CCL7/MCP-3, M-CSF, MIF, CXCL9/MIG, CCL3/CCL4/MIP-1 α/β, CCL20/MIP-3α, CCL19/MIP-3 β, MMP-9, Myeloperoxidase, Osteopontin (OPN), PDGF-AA, PDGF-AB/BB, Pentraxin-3, CXCL4/PF4, RAGE, CCL5/RANTES, RBP4, Relaxin-2, Resistin, CXCL12/SDF-1 α, Serpin E1/PAI-1, SHBG, ST2/IL-1 R4, CCL17/TARC, TFF3, TfR, TGF-α, Thrombospondin-1, TNF-α, uPAR, VEGF, Vitamin D BP		
Human Kidney Biomarker Antibody Array Kit	38 kidney biomarkers	ARY019
Adiponectin, Aminopeptidase N, Angiotensinogen, Annexin V, β2-Microglobulin, CCL2/MCP-1, Clusterin, CXCL1/GROa, CXCL16, Cyr61, Cystatin C, DPPIV, EGF, EGF R, FABP1/L-FABP, Fetuin A, IL-1ra, IL-6, IL-10, KIM-1/TIM-1/HAVCR, Lipocalin-2/NGAL, MMP-9, Neprilysin, PSA, RAGE, RBP4, Renin, Resistin, SCF, Serpin A3, TNF-α, TNF RI, TFF3, Thrombospondin-1, TWEAK, uPA, VCAM-1, VEGF-A		
Human Phospho-Immunoreceptor Antibody Array Kit	59 phospho-immunoreceptors	ARY004B
2B4/SLAMF4, BLAME/SLAMF8, BTLA, CD3ε, CD5, CD6, CD28, CD84/SLAMF5, CD229/SLAMF3, CEACAM-1, CLEC-1, CLEC-2, CRACC/SLAMF7, CTLA-4/CD152, DCIR/CLEC4A, Dectin-1/CLEC7A, DNAM-1, Fcε RII/CD23, Fcγ RIIA, Fcγ RIIIA/B, FcRH1/IRTA5, FcRH2/IRTA4, FcRH4/IRTA1, FcRH5/IRTA2, ILT2/CD85j, ILT3/CD85k, ILT4/CD85d, ILT5/CD85a, ILT6/CD85e, Integrin β3/CD61, KIR2DL4, LAIR-1, LAIR-2, LMIR1/CD300A, LMIR2/CD300C, LMIR3/CD300LF, LMIR6/CD300LE, MDL-1/CLEC5A, NKp30/NCR3, NKp44/NCR2, NKp46/NCR1, NKp80/KLRF1, NTB-A/SLAMF6, PD-1, PECAM/CD31, SHIP-1, SHP-1, SHP-2, Siglec-2/CD22, Siglec-3/CD33, Siglec-5, Siglec-7, Siglec-9, Siglec-10, SIRP-b1, SLAM/CD150/SLAMF1, TREM-1, TREM-2, TREML1/TLT-1		
Human Phospho-Kinase Antibody Array Kit	43 phospho-kinases	ARY003B
Akt (S473)*, Akt (T308)*, AMPKα1*, AMPKα2, βcatenin*, Chk-2, c-Jun*, CREB*, EGF R (Y1068), ERK1/2* , FAK*, Fgr, Fyn*, GSK-3α/β*, Hck, HSP27, HSP60, JNK pan*, Lck, Lyn, MSK1/2*, eNOS, p27 (T198), p38α*, p53 (S392), p53 (S46), p53 (S15), p70 S6 Kinase (T389)*, p70 S6 Kinase (T421/S424)*, PDGF R β (Y751), PLCg-1, PRAS40 (T246), Pyk2, RSK1/2/3*, Src*, STAT2, STAT3*, STAT3 (S727), STAT5a*, STAT5a/b*, STAT5b*, STAT6, TOR*, WNK-1 (T60), Yes *Crossreacts with mouse and/or rat		
Human Phospho-MAPK Antibody Array Kit	26 phospho-kinases	ARY002B
Akt1*, Akt2*, Akt3*, Akt pan*, CREB*, ERK1*, ERK2*, GSK-3α/β*, GSK-3β*, HSP27, JNK1*, JNK2*, JNK3, JNK pan*, MKK3, MKK6, MSK2*, p38α*, p38β, p38γ*, p38δ*, p53, p70 S6K,RSK1, RSK2*, TOR *Crossreacts with mouse and/or rat		
Human Phospho-RTK Antibody Array Kit	49 phospho-RTKs	ARY001B
ALK/CD246, Axl, DDR1, DDR2, Dtk, EGF R, EphA1, EphA2, EphA3, EphA4, EphA5, EphA6, EphA7, EphA10, EphB1, EphB2, EphB3, EphB4, EphB6, ErbB2, ErbB3, ErbB4, FGF R1, FGF R2α, FGF R3, FGF R4, Flt-3/Flk-2, HGF R/c-MET, IGF-I R, Insulin R/CD220, M-CSF R, Mer, MSP R/Ron, MuSK, PDGF Rα, PDGF Rβ, c-Ret, ROR1, ROR2, Ryk, SCF R/c-kit, Tie-1, Tie-2, TrkA, TrkB, TrkC, VEGF R1/Flt-1, VEGF R2/KDR, VEGF R3/Flt-4		
Human Pluripotent Stem Cell Antibody Array Kit	15 pluripotent stem cell markers	ARY010
E-Cadherin, α-Fetoprotein, GATA-4*, Goosecoid, HCG, HNF-3/FoxA2*, Nanog, Oct-3/4, Otx2, PDX-1/PF1*, Snail, SOX2*, SOX17, TP63/TP73L, VEGF R2/KDR* Crossreacts with mouse		
Human Protease Antibody Array Kit	34 proteases	ARY021
ADAM8, ADAM9, ADAMTS1, ADAMTS13, Cathepsin A, Cathepsin B, Cathepsin C/DPPI, Cathepsin D, Cathepsin E, Cathepsin L, Cathepsin S, Cathepsin V, Cathepsin X/Z/P, DPPIV/CD26, Kallikrien 3/PSA, Kallikrien 5, Kallikrien 6, Kallikrien 7, Kallikrien 10, Kallikrien 11, Kallikrien 13, MMP-1, MMP-2, MMP-3, MMP-7, MMP-8, MMP-9, MMP-12, MMP-13, Neprilysin/CD10, Presenilin-1, Proprotein Convertase 9, Proteinase 3, uPA/Urokinase		
Human Protease Inhibitor Antibody Array Kit	32 protease inhibitors	ARY023
APP, Cystatin A, Cystatin B, Cystatin C, Cystatin E/M, EMMPRIN, Fetuin B, HAI-1, HAI-2, HE4/WFDC2, Latexin, Lipocalin-1, Lipocalin-2/NGAL, RECK, Serpin A5, Serpin A8/AGT, Serpin A9/Centerin, Serpin A12, Serpin B5/Maspin, Serpin B6, Serpin B8, Serpin E1/PAI-1, Serpin F1/PEDF, Testican 1/SPOCK1, Testican 2/SPOCK2, TFPI, TFPI-2, TIMP-1, TIMP-2, TIMP-3, TIMP-4, Trappin-2/Elafin		

Proteome Profiler Membrane-based Antibody Arrays

Product	Measures	R&D Systems; Catalog #
Human Soluble Receptor Antibody Array Kit (Hematopoietic Panel)	105 soluble receptors	ARY011
Hematopoietic Panel: CD5, CD6, CD30/TNFRSF8, CD40/TNFRSF5, CD43, CD48/SLAMF2, CD59, CD84/SLAMF5, CD97, CD163, CD229/SLAMF3, Chitinase 3-like 1, CRP, CRTAM, CXCL16, DNAM-1, DPPIV, IFN-γ R2, IL-2 Rα, IL-2 Rα, IL-6 R, Integrin α3/CD49c, Integrin α4/CD49d, Integrin α5/CD49e, Integrin α6/CD49f, Integrin α9, Integrin αE/CD103, Integrin αL/CD11a, Integrin αM/CD11b, Integrin αX/CD11c, LAG-3, MMP-9, MMR, Myeloperoxidase, Resistin, L-Selectin, Siglec-5, Siglec-6, Siglec-7, Siglec-9, Siglec-10, TIM-3, TLR2, TLR4, TNF RI/TNFRSF1A, TRACP, TRANCE/TNFSF11, TREM-1 Common Analytes Panel: ACE, ADAM8, ADAM9, ADAM10, ALCAM, Amphiregulin, APP pan, BACE-1, BCAM, C1q R1/CD93, CD9, CD23/Fcε RII, CD31/PECAM-1, CD36/SR-B3, CD40 Ligand/TNFSF5, CD44H, CD58/LFA-3, CD90/Thy1, CD99, CD155/PVR, CEACAM-1, CX3CL1/Fractalkine, CXCL8/IL-8, EMMPRIN, Endoglin, Epiregulin, Galectin-1, Galectin-3, Galectin-3BP, HB-EGF, ICAM-2, IL-1 RII,IL-15 Rα, Integrin β1/CD29, Integrin β2/CD18, Integrin β3/CD61, Integrin β4/CD104, Integrin β5, Integrin β6, JAM-A, Lipocalin-2/NGAL, LOX-1, MD-1, MMP-2, NCAM-1/CD56, NCAM-L1, Osteopontin, PAR1, Pref-1, RECK, Stabilin-1, TACE, Thrombospondin, TIMP-1, TIMP-2, TIMP-3, TNF RII/TNFRSF1B		
Human Soluble Receptor Antibody Array Kit (Non-Hematopoietic Panel)	119 soluble receptors	ARY012
Non-Hematopoietic Panel: ADAM15, βIG-H3, BMPR-IB, Cadherin-4, Cadherin-11, Cadherin-13, E-Cadherin, N-Cadherin, P-Cadherin, VE-Cadherin, Cathepsin D, CD40/TNFRSF5, CEACAM-5, CHL-1, Clusterin, Coagulation Factor II/Thrombin, COMP, CRELD2, Desmoglein 2, ECM-1, EGF R, Endoglycan, EpCAM, ErbB2, ErbB3, ErbB4, ESAM, Galectin-2, HPRG, Integrin α3/CD49c, Integrin α5/CD49e, Integrin α6/CD49f, Integrin α9, Integrin αV/CD51, Jagged 1, JAM-B, JAM-C, LRP-6, MCAM/CD146, MEPE, MUCDHL, Nectin-2, Nectin-4, Neurotrimin, Notch-1, NrCAM, Periostin, Podocalyxin, E-Selectin, Semaphorin 3A, SREC-I, SREC-II, Stanniocalcin 1, Syndecan-1, Syndecan-4, Thrombospondin-2, TIMP-4, TROP-2, VAP-1, VCAM-1, VEGF R1, VEGF R2 Common Analytes Panel: ACE, ADAM8, ADAM9, ADAM10, ALCAM, Amphiregulin, APP pan, BACE-1, BCAM, C1q R1/CD93, CD9, CD23/Fcε RII, CD31/PECAM-1, CD36/SR-B3, CD40 Ligand/TNFSF5, CD44H, CD58/LFA-3, CD90/Thy1, CD99, CD155/PVR, CEACAM-1, CX3CL1/Fractalkine, CXCL8/IL-8, EMMPRIN, Endoglin, Epiregulin, Galectin-1, Galectin-3, Galectin-3BP, HB-EGF, ICAM-2, IL-1 RII, IL-15 Rα, Integrin β1/CD29, Integrin β2/CD18, Integrin β3/CD61, Integrin β4/CD104, Integrin β5, Integrin β6, JAM-A, Lipocalin-2/NGAL, LOX-1, MD-1, MMP-2, NCAM-1/CD56, NCAM-L1, Osteopontin, PAR1, Pref-1, RECK, Stabilin-1, TACE, Thrombospondin, TIMP-1, TIMP-2, TIMP-3, TNF RII/TNFRSF1B		
Mouse Adipokine Antibody Array Kit	38 obesity-related proteins	ARY013
Adiponectin, AgRP, Angiopoietin-like 3, CCL2/MCP-1, CCL5/RANTES, CRP, DPPIV, Endocan, Fetuin A, FGF acidic, FGF-21, HGF, ICAM-1, IGF-I, IGF-II, IGFBP-1, IGFBP-2, IGFBP-3, IGFBP-5, IGFBP-6, IL-6, IL-10, IL-11, Leptin, LIF, Lipocalin-2/NGAL, M-CSF, Oncostatin M, Pentraxin 2, Pentraxin 3, Pref-1, RAGE, RBP4, Resistin, Serpin E1/PAI-1, TIMP-1, TNF-α, VEGF		
Mouse Angiogenesis Antibody Array Kit	53 angiogenesis molecules	ARY015
ADAMTS1*, Amphiregulin*, Angiogenin*, Angiopoietin-1*, Angiopoietin-3*, Coagulation Factor III/Tissue Factor, CXCL10/CRG-2*, CXCL16*, Cyr61*, DLL4*, DPPIV*, EGF, Endoglin, Endostatin/Collagen XVIII*, Endothelin-1*, FGF acidic*, FGF basic*, FGF-7, Fractalkine, GM-CSF, HB-EGF, HGF*, IGFBP-1*, IGFBP-2*, IGFBP-3*, IL-1α, IL-1β, IL-10, KC*, Leptin, MCP-1*, MIP-1α, MMP-3 (pro and active), MMP-8 (pro)*, MMP-9 (pro and active)*, NOV,* Osteopontin*, PD-ECGF*, PDGF-AA*, PDGF-AB/PDGF-BB*, Pentraxin-3, Platelet Factor 4*, PlGF-2*, Prolactin*, Proliferin, SDF-1, Serpin E1*, Serpin F1, Thrombospondin-2*, TIMP-1, TIMP-4*, VEGF*, VEGF-B* *Crossreacts with rat		
Mouse Chemokine Antibody Array Kit	25 chemokines	ARY020
CCL11/Eotaxin, CCL12/MCP-5, CCL2/JE/MCP-1, CCL21/6Ckine, CCL22/MDC, CCL27/CTACK, CCL28, CCL3/CCL4 (MIP-1α /MIP-1β), CCL5/RANTES, CCL6/C10, CCL8/MCP-2, CCL9/10/MIP-1 γ, Chemerin, Complement Component C5/C5a, CX3CL1/Fractalkine, CXCL1/KC, CXCL2/MIP-2, CXCL9/MIG, CXCL10/IP-10/CRG-2, CXCL11/I-TAC, CXCL12/SDF-1, CXCL13/BLC/BCA-1, CXCL16, IL-16, LIX		
Mouse Cytokine Antibody Array Kit	40 cytokines	ARY006
BLC, C5a, CCL1/I-309, CCL2/MCP-1, CCL3/MIP-1α, CCL4/MIP-1β, CCL5/RANTES, CCL11/Eotaxin, CCL12/MCP-5, CCL17/TARC, CXCL1/KC, CXCL9/MIG, CXCL10/IP-10, CXCL11/I-TAC, CXCL12/SDF-1, G-CSF, GM-CSF, ICAM-1, IFN-γ, IL-1α, IL-1β, IL-1ra, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-10, IL-12 p70, IL-13, IL-16, IL-17, IL-23, IL-27, M-CSF, MIP-2, TIMP-1, TNF-α, TREM-1		
Mouse Phospho-RTK Antibody Array Kit	39 phospho-RTKs	ARY014
Axl, c-Ret, Dtk, EphA1, EphA2, EphA3, EphA6, EphA7, EphA8, EphB1, EphB2, EphB4, EphB6, EGF R, ErbB2, ErbB3, ErbB4, FGF R2 (IIIc), FGF R3, FGF R4, Flt-3, HGF R, Insulin R, IGF-I R, M-CSF R, Mer, MSP R, MuSK, PDGF Rα, PDGF Rβ, SCF R, Tie-1, Tie-2, TrkA, TrkB, TrkC, VEGF R1, VEGF R2, VEGF R3		
Rat Adipokine Antibody Array Kit	30 obesity-related proteins	ARY016
Angiopoietin-like 3, CCL2/MCP-1, CCL5/RANTES, DPPIV, Endocan, FGF-21, HGF, ICAM-1, IGF-I, IGF-II, IGFBP-1, IGFBP-2, IGFBP-3, IGFBP-5, IGFBP-6, IL-1β, IL-6, IL-10, IL-11, Leptin, LIF, Lipocalin-2/NGAL, M-CSF, Pref-1, RAGE, Resistin, Serpin E1/PAI-1, TIMP-1, TNF-α, VEGF		
Rat Cytokine Antibody Array Kit	29 cytokines	ARY008
CCL3/MIP-1α, CCL5/RANTES, CCL20/MIP-3α, CNTF, CX3CL1/Fractalkine, CXCL1/CINC-1, CXCL2/CINC-3, CXCL3/CINC-2α/β, CXCL7/Thymus Chemokine-1, CXCL9/MIG, CXCL10/IP-10, GM-CSF, ICAM-1, IFN-γ, IL-1α, IL-1β, IL-1ra, IL-2, IL-3, IL-4, IL-6, IL-10, IL-13, IL-17, LIX, L-Selectin, TIMP-1, TNF-α, VEGF		
Human Adipokine Array Kit	58 obesity-related proteins	ARY024
Adiponectin, Angiopoietin-1, Angiopoietin-2, Angiopoietin-like 2, Angiopoietin-like 3, BAFF/BLyS, BMP-4, Cathepsin D, Cathepsin L, Cathepsin S, CCL2/MCP-1, CCL5/RANTES, Chemerin, Complement Factor D, C-Reactive Protein, CXCL8/IL-8, DPPIV/CD26, Endocan, EN-RAGE, Fetuin B, FGF basic, FGF-19, Fibrinogen, Growth Hormone, HGF, ICAM-I, IGFBP-2, IGFBP-3, IGFBP-4, IGFBP-6, IGFBP-rp1/IGFBP-7, IL-1 β, IL-6, IL-10, IL-11, LAP (TGF-β1) , Leptin, LIF, Lipocalin-2/NGAL, M-CSF, MIF, Myeloperoxidase, Nidogen-1/Entactin, Oncostatin M, Pappalysin-1/PAPP-A, PBEF/Visfatin, PCSK9, Pentraxin-3, Pref-1/DLK-1/FA1, RAGE, Resistin, Serpin A12, Serpin A8/AGT, Serpin E1/PAI-1, TIMP-1, TIMP-3, TNF-α, VEGF		
Human Protease/Protease Inhibitor Array Kit	34 proteases and 32 proteases inhibitors	ARY025
Adiponectin, Angiopoietin-1, Angiopoietin-2, Angiopoietin-like 2, Angiopoietin-like 3, BAFF/BLyS, BMP-4, Cathepsin D, Cathepsin L, Cathepsin S, CCL2/MCP-1, CCL5/RANTES, Chemerin, Complement Factor D, C-Reactive Protein, CXCL8/IL-8, DPPIV/CD26, Endocan, EN-RAGE, Fetuin B, FGF basic, FGF-19, Fibrinogen, Growth Hormone, HGF, ICAM-I, IGFBP-2, IGFBP-3, IGFBP-4, IGFBP-6, IGFBP-rp1/IGFBP-7, IL-1 β, IL-6, IL-10, IL-11, LAP (TGF-β1) , Leptin, LIF, Lipocalin-2/NGAL, M-CSF, MIF, Myeloperoxidase, Nidogen-1/Entactin, Oncostatin M, Pappalysin-1/PAPP-A, PBEF/Visfatin, PCSK9, Pentraxin-3, Pref-1/DLK-1/FA1, RAGE, Resistin, Serpin A12, Serpin A8/AGT, Serpin E1/PAI-1, TIMP-1, TIMP-3, TNF-α, VEGF		
Human XL Oncology Array Kit	84 cancer-related molecules	ARY026
AFP, Amphiregulin, Angiopoietin-1, ANGPTL4, ENPP-2/Autotaxin, AXL, BCL-X, CA125/MUC-16, E-Cadherin, VE-Cadherin, CAP-G, CA-9, Cathepsin B, Cathepsin D, Cathepsin S, CEACAM-5, Decorin, DKK-1, DLL-1, EGF R/ErbB1, Endoglin/CD105, Endostatin, Enolase 2, eNOS, EpCAM, ERα, ErbB2, ErbB3, ErbB4, FGF basic, FoxC2, FKHR, Galectin-3, GM-CSF, HCG, HGF R/c-Met, HIF-1α, HNF-3β, HO-1/HMOX1, ICAM-1/CD54, CD25/IL-2 Rα, IL-6, CXCL8/IL-8, IL-18 Bpa, KLK-3/PSA, KLK-5, KLK-6, Leptin (OB), Lumican, CCL2/MCP-1, CCL8/MCP-2, CCL7/MCP-3, M-CSF, Mesothelin, CCL3/MIP-1α, CCL20/MIP-3α, MMP-2, MMP-3, MMP-9, MSP/MST1, MUC-1, Nectin-4, Osteopontin, p27/Kip1, p53, PDGF-AA, CD31/PECAM-1, Progesterone R, Progranulin, Prolactin, Prostatin, E-Selectin, Maspin, PAI-1/Serpin E1, SNAIL, SPARC, Survivin, Tenascin-C, THBS-1, TIE-2, UPA-1, VCAM-1, VEGF, Vimentin		

Tocris Products

Category	Product Name	Description	Catalog #
Akt (Protein Kinase B)			
Inhibitors	API-2	Selective inhibitor of Akt/PKB signaling. Antitumor and antiviral	2151
	PHT 427	Dual Akt and PDK1 inhibitor; antitumor	4598
Activators	SC 79	Akt activator	4635
AMPK			
inhibitor	Dorsomorphin dihydrochloride	Potent and selective AMPK inhibitor	3093
Activators	A 769662	Potent AMPK activator	3336
	AICAR	AMPK activator	2840
	Metformin hydrochloride	Activator of LKB1/AMPK; antidiabetic agent	2864
EGFR			
Inhibitors	AG 1478 hydrochloride	Highly potent EGFR-kinase inhibitor	1276
	AG 490	EGFR-kinase inhibitor. Also JAK2, JAK3 inhibitor	0414
	Iressa	Orally active, selective EGFR inhibitor	3000
ERK			
Inhibitors	BIX 02189	Selective MEK5 and ERK5 inhibitor	4842
	FR 180204	Selective ERK inhibitor	3706
	XMD 8-92	Selective ERK5/BMK1 inhibitor	4132
FGFR			
Inhibitors	PD 173074	FGFR1 and -3 inhibitor	3044
	SU 5402	Potent FGFR and VEGFR inhibitor	3300
FLT3			
Inhibitors	Lestaurtinib	JAK2, FLT3 and TrkA inhibitor	3395
	TCS 359	Potent FLT3 inhibitor	2591
GSK-3			
Inhibitors	BIO	Potent, selective GSK-3 inhibitor	3194
	CHIR 99021	Highly selective GSK-3 inhibitor	4423
	SB 216763	Potent, selective GSK-3 inhibitor	1616
Heat Shock Proteins			
Inhibitors	17-AAG	Selective Hsp90 inhibitor	1515
	Gedunin	Hsp90 inhibitor; exhibits anticancer and antimalarial activity	3387
	Geldanamycin	Selective Hsp90 inhibitor	1368
	PU H71	Potent Hsp90 inhibitor	3104
	VER 155008	Hsp70 inhibitor	3803
HIF			
Inhibitors	IOX 2	Potent, selective HIF-1α prolyl hydroxylase-2 (PHD2) inhibitor	4451
	PX 12	Thioredoxin-1 inhibitor	2954
Activators	ML 228	HIF pathway activator	4565

Category	Product Name	Description	Catalog #
Insulin and Insulin-like Receptors			
Inhibitors	BMS 536924	Dual IR/IGF1R inhibitor	4774
	Picropodophyllotoxin	Selective IGF1R inhibitor	2956
Activators	Insulin (human) recombinant	Endogenous peptide agonist	3435
mTOR			
Inhibitors	PI 103 hydrochloride	Inhibitor of PI 3-kinase, mTOR and DNA-PK	2930
	Rapamycin	mTOR inhibitor; mmunosuppressant	1292
	Torin 1	Potent and selective mTOR inhibitor	4247
PI 3-Kinase			
Inhibitors	LY 294002 hydrochloride	Selective PI 3-kinase inhibitor	1130
	Wortmannin	Potent, irreversible inhibitor of PI 3-kinase. Also inhibitor of PLK1	1232
Activators	740 Y-P	Cell-permeable PI 3-kinase activator	1983
RSK			
Inhibitors	PF 4708671	S6K1 inhibitor	4032
	SL 0101-1	Selective p90 ribosomal S6 kinase (RSK) inhibitor	2250
Trk Receptors			
Agonists	7,8-Dihydroxyflavone	TrkB agonist	3826
	BDNF (human)	Activates TrkB and p75 receptors	2837
	LM 22A4	Potent TrkB agonist	4607
VEGFR			
Inhibitors	Axitinib	Potent VEGFR-1, -2 and -3 inhibitor	4350
	SU 5416	VEGFR inhibitor. Also inhibits KIT, RET, MET and FLT3	3037
	Sunitinib malate	Potent VEGFR, PDGFRβ and KIT inhibitor	3768
Tocriscreen Collections			
	Tocriscreen Total	1120 biologically active compounds pre-dissolved in DMSO (250 µl 10mM solutions)	2884
	Tocriscreen Mini	1120 biologically active compounds pre-dissolved in DMSO (50 µl 10mM solutions)	2890
	Tocriscreen Kinase Inhibitor Toolbox	80 kinase inhibitors supplied pre-dissolved in DMSO (250 µl 10mM solutions)	3514
	Tocriscreen Stem Cell Toolbox	80 Stem Cell modulators supplied pre-dissolved in DMSO (250 µl 10 mM solutions)	5060
	Tocriscreen Epigenetics Toolbox	80 Epigenetic modulators supplied pre-dissolved in DMSO (250 µL 10 mM solutions)	5268
Ligand Sets			
	MEK Inhibitor Tocriset	Selection of 3 MEK inhibitors (U0126, PD98059 and SL 327)	2243

Surveyor IC ELISA Kits

Molecule & Phosphorylation Site(s)	Species	R&D Systems; Catalog #
Total β-Catenin	Human	SUV1329
Phospho-ERK1 (T202/Y204)/ERK2 (T185/Y187)	Human, Mouse, Rat	SUV1018B
Total HSP70/HSPA1A	Human, Mouse, Rat	SUV1663
Phospho-p38α (T180/Y182)	Human, Mouse, Rat	SUV869B
Total Survivin	Human	SUV647

**Catalog #'s listed are for 2-plate packs. These products are also available in 5-plate and 15-plate economy packs. Please inquire.*

DuoSet IC ELISA Development Systems

Molecule & Phosphorylation Site(s)	Species	R&D Systems; Catalog #*
Phospho-Akt (S473) Pan Specific	Human, Mouse, Rat	DYC887B-2
Phospho-Akt1 (S473)	Human, Mouse	DYC2289C-2
Total Akt1	Human, Mouse, Rat	DYC1775-2
Total Akt2	Human	DYC2315-2
Phospho-AMPKα1 (T183)	Human	DYC3528-2
Total AMPKα1	Human, Mouse, Rat	DYC3197-2
Total Annexin A2	Human	DYC3928-2
Total APE	Human	DYC1044-2
Phospho-APP (T668)	Human, Mouse, Rat	DYC2508-2
Phospho-ATM (S1981)	Human	DYC1655-2
Phospho-Axl	Human	DYC2228-2
Total Axl	Human	DYC1643-2
Total β-Catenin	Human	DYC1329-2
Total Bad	Human	DYC819-2
Total Bax-α	Human	DYC820-2
Total Bcl-2	Human	DYC827B-2
Total Bcl-xL	Human, Mouse	DYC894-2
Total E-Cadherin	Human	DYC4225-2
Total VE-Cadherin	Human	DYC938-2
Cleaved Caspase-3 (Asp175)	Human, Mouse	DYC835-2
Phospho-Chk2 (T68)	Human	DYC1626-2
Total Clusterin	Human	DYC2937-2
Total COX-2	Human, Mouse	DYC4198-2
Phospho-CREB (S133)	Human, Mouse, Rat	DYC2510-2
Total Cytochrome c	Mouse, Rat	DYC897-2
Phospho-DDR1	Human	DYC5859-2
Total DDR1	Human	DYC2396-2
Phospho-DDR2	Human	DYC6170-2
Total DDR2	Human	DYC2538-2
Total Dtk	Human	DYC5600-2
Phospho-EGF R/ErbB1 (Y1068)	Human	DYC3570-2
Phospho-EGF R/ErbB1	Human	DYC1095-2
Total EGF R/ErbB1	Human	DYC1854-2
Total EMMPRIN/CD147	Human	DYC972-2
Phospho-EphA1	Human	DYC4835-2
Total EphA1	Human	DYC638-2
Phospho-EphA2	Human	DYC4056-2
Total EphA2	Human	DYC3035-2
Phospho-EphA5	Human, Mouse	DYC5037-2
Total EphA5	Human, Mouse	DYC3036-2
Phospho-EphB4	Human	DYC4057-2
Total EphB4	Human	DYC3038-2
Phospho-ERα/NR3A1 (S118)	Human	DYC5954-2
Total ERα/NR3A1	Human	DYC5715-2
Phospho-ErbB2/Her2 (Y1196)	Human	DYC4438-2
Phospho-ErbB2/Her2	Human	DYC1768-2
Total ErbB2/Her2	Human	DYC1129-2

Molecule & Phosphorylation Site(s)	Species	R&D Systems; Catalog #*
Phospho-ErbB3/Her3	Human	DYC1769-2
Total ErbB3/Her3	Human	DYC234-2
Phospho-ErbB4/Her4	Human	DYC2115-2
Total ErbB4/Her4	Human	DYC1133-2
Phospho-ERK1 (T202/Y204)	Human, Mouse, Rat	DYC1825-2
Total ERK1	Human	DYC1940-2
Phospho-ERK1 (T202/Y204)/ ERK2 (T185/Y187)	Human, Mouse, Rat	DYC1018B-2
Total ERK2	Human, Mouse, Rat	DYC1230C-2
Phospho-ERK2 (T185/Y187)	Human, Mouse, Rat	DYC1483-2
Phospho-Erythropoietin R (Y426)	Human	DYC6926-2
Phospho-Erythropoietin R	Human	DYC5200-2
Total Erythropoietin R	Human	DYC963-2
Phospho-FAK (Y397)	Human, Mouse, Rat	DYC4528-2
Total FAK	Human, Mouse, Rat	DYC4467-2
Phospho-FGF R1	Human	DYC5079-2
Phospho-FGF R2α	Human	DYC684-2
Total FGF R2α	Human	DYC665-2
Phospho-FGF R3	Human	DYC2719-2
Total FGF R3	Human	DYC766-2
Phospho-FGF R4	Human	DYC5516-2
Total FGF R4	Human	DYC685-2
Phospho-Flt-3/Flk-2	Human	DYC368-2
Total Flt-3/Flk-2	Human	DYC912-2
Total GAPDH/G3PDH	Human, Mouse, Rat	DYC5718-2
Phospho-gp130	Human	DYC3407-2
Total gp130	Human	DYC228-2
Phospho-GSK-3α (S21)	Human	DYC4125-2
Phospho-GSK-3α/β (S21/S9)	Human, Mouse, Rat	DYC2630-2
Total GSK-3α/β	Human, Mouse, Rat	DYC2157-2
Phospho-GSK-3β (S9)	Human, Mouse, Rat	DYC1590-2
Phospho-HGF R/c-MET	Human	DYC2480-2
Total HGF R/c-MET	Human	DYC358-2
Total HIF-1α	Human, Mouse	DYC1935-2
Total HIF-2α/EPAS1	Human, Rat	DYC2997-2
Phospho-Histone H2AX (S139)	Human	DYC2288-2
Total HO-1/HMOX1/HSP32	Human	DYC3776-2
Phospho-HSP27 (S78/S82)	Human, Mouse, Rat	DYC2314-2
Total HSP27	Human	DYC1580-2
Total HSP60	Human	DYC1800-2
Total HSP70/HSPA1A	Human, Mouse, Rat	DYC1663-2
Phospho-IFN-γ R1/CD119	Human	DYC3058-2
Total IFN-γ R1/CD119	Human	DYC673-2
Phospho-IGF-I R	Human	DYC1770-2
Total IGF-I R	Human	DYC305-2
Total IGF-II R	Human	DYC5537-2
Total IκB-α	Human	DYC4299-2

**Catalog #'s listed are for 2-plate packs. These products are also available in 5-plate and 15-plate economy packs. Please inquire.*

DuoSet IC ELISA Development Systems *continued*

Molecule & Phosphorylation Site(s)	Species	R&D Systems; Catalog #*
Phospho-Insulin R/CD220	Human	DYC2718-2
Total Insulin R/CD220	Human	DYC1544-2
Total Integrin α5β1	Human	DYC3230-2
Total Integrin αVβ3	Human	DYC3050-2
Total JNK Pan Specific	Human, Mouse, Rat	DYC1205-2
Phospho-JNK2 (T183/Y185)	Human, Mouse, Rat	DYC2236-2
Total JNK2	Human, Mouse, Rat	DYC1846-2
Total Leptin R	Human	DYC389-2
Phospho-Lyn (Y397)	Human	DYC3936-2
Phospho-M-CSF R	Human	DYC3268-2
Total M-CSF R	Human	DYC329-2
Total MDM2/HDM2	Human	DYC1244-2
Phospho-Mer	Human	DYC2579-2
Total Mer	Human	DYC891-2
Phospho-MKK3 (S218/T222)	Human	DYC5585-2
Phospho-MKK6 (S207/T211)	Human	DYC5586-2
Phospho-MSP R/Ron	Human	DYC1947-2
Total MSP R/Ron	Human	DYC691-2
Total Numb	Human, Mouse, Rat	DYC4338-2
Total p21/CIP1/CDKN1A	Human	DYC1047-2
Total p27/Kip1	Human	DYC2256-2
Phospho-p38α (T180/Y182)	Human, Mouse, Rat	DYC869-2
Total p38α	Human, Mouse, Rat	DYC8691B-2
Phospho-p38γ (T183/Y185)	Human, Mouse	DYC1664-2
Phospho-p38δ (T180/Y182)	Human	DYC2124-2
Phospho-p53 (S15)	Human	DYC1839-2
Phospho-p53 (S46)	Human	DYC1489-2
Phospho-p53 (S392)	Human	DYC2996-2
Total p53	Human Mouse	DYC1043-2 DYC1746-2
Phospho-p70 S6 Kinase (T389)	Human	DYC896-2
Phospho-p70 S6 Kinase (T421/S424)	Human, Mouse, Rat	DYC8965-2
Total p70 S6 Kinase	Human, Mouse, Rat	DYC8962-2
Total Paxillin	Human, Mouse, Rat	DYC4259-2
Phospho-PDGF Rα	Human	DYC2114-2
Total PDGF Rα	Human	DYC322-2
Phospho-PDGF Rβ (Y751)	Human	DYC3096-2
Phospho-PDGF Rβ	Human	DYC1767-2
Total PDGF Rβ	Human	DYC385-2
Total Pin1	Human, Mouse	DYC2294-2
Total PON1	Human	DYC5816-2
Total PON2	Human	DYC4344-2
Total PON3	Human	DYC4345-2
Total PP2A	Human, Mouse, Rat	DYC1653-2
Phospho-PRAS40 (T246)	Human	DYC6890-2

Molecule & Phosphorylation Site(s)	Species	R&D Systems; Catalog #*
Phospho-Progesterone R/NR3C3 (S294)	Human	DYC5955-2
Total Progesterone R/NR3C3	Human	DYC5415-2
Phospho-Prolactin R	Human	DYC4058-2
Total Prolactin R	Human	DYC1167-2
Total PTP1B	Human	DYC1366-2
Total PTP1B	Mouse, Rat	DYC3954-2
Phospho-Ret	Human	DYC6549-2
Total Ret	Human	DYC1168-2
Phospho-Ribosomal Protein S6/RPS6 (S235/S236)	Human, Mouse, Rat	DYC3918-2
Total ROR1	Human	DYC2000-2
Total ROR2	Human	DYC2064-2
Phospho-RSK (S380) Pan Specific	Human, Mouse, Rat	DYC889-2
Phospho-RSK1 (S380)	Human	DYC892-2
Phospho-SCF R/c-kit	Human	DYC3527-2
Total SCF R/c-kit	Human	DYC332-2
Phospho-SHP-2 (Y542)	Human, Mouse, Rat	DYC3790-2
Total SHP-2	Human, Mouse, Rat	DYC1894-2
Total SMAC/Diablo	Human	DYC789-2
Total SOD2/Mn-SOD	Human, Mouse, Rat	DYC3419-2
Phospho-Src (Y419)	Human	DYC2685-2
Phospho-STAT3 (Y705)	Human, Mouse	DYC4607B-2
Total Survivin	Human	DYC647-2
Total TC-PTP	Human, Mouse, Rat	DYC1930-2
Total Tie-1	Human	DYC619-2
Phospho-Tie-2	Human Mouse	DYC2720-2 DYC2816-2
Total Tie-2	Human Mouse	DYC313-2 DYC762-2
Phospho-TOR (S2448)	Human	DYC1665-2
Phospho-TrkA	Human	DYC2578-2
Total TrkA	Human	DYC175-2
Phospho-TrkB	Human	DYC688-2
Total TrkB	Human	DYC397-2
Phospho-TrkC	Human	DYC2577-2
Total TrkC	Human	DYC373-2
Phospho-VEGF R1/Flt-1	Human	DYC4170-2
Total VEGF R1/Flt-1	Human	DYC4347-2
Phospho-VEGF R2/KDR/Flk-1	Human	DYC1766-2
Total VEGF R2/KDR/Flk-1	Human	DYC1780-2
Phospho-VEGF R3/Flt-4	Human	DYC2724-2
Total VEGF R3/Flt-4	Human	DYC3491-2
Phospho-WNK1 (T60)	Human, Mouse, Rat	DYC4720-2
Total XIAP	Human	DYC822-2
Phospho-Yes (Y426)	Human	DYC3929-2
Total ZAP70	Human	DYC3709-2

**Catalog #'s listed are for 2-plate packs. These products are also available in 5-plate and 15-plate economy packs. Please inquire.*

Cell-Based ELISA Kits

Molecule & Phosphorylation Site(s)	Species	R&D Systems; Catalog #
Base Kit 1	Multi-species	KCB001
Phospho-Akt (S473) Pan Specific	Human, Mouse, Rat	KCB887
Phospho-Akt (T308) Pan Specific	Human, Mouse, Rat	KCB8871
Phospho-Bad (S112)	Human, Mouse, Rat	KCB7517
Phospho-CD117/c-kit	Human	DYC3527-2
Cleaved Caspase-8 (Asp391)	Human	KCB705
Total β-Catenin	Human, Mouse	KCB1329
Total CD117/c-kit	Human	DYC332-2
Total COX-2	Human, Mouse	KCB4198
Phospho-CREB (S133)	Human, Mouse, Rat	KCB2510
Phospho-EGF R/ErbB1 (Y1068)	Human	KCB1095
Phospho-ErbB2/Her2 (Y1196)	Human	KCB4438
Phospho-ErbB3/Her3 (Y1262)	Human	KCB5677
Phospho-ErbB4/Her4 (Y1188)	Human	KCB4418
Phospho-ERK1 (T202/Y204)/ERK2 (T185/Y187)	Human, Mouse, Rat	KCB1018
Phospho-FRS2 (Y436)	Human, Mouse, Rat	KCB5126
Phospho-HGF R/c-MET (Y1234/Y1235)	Human	KCB2480
Total HIF-1α	Human, Mouse	KCB1935
Phospho-Histone H2AX (S139)	Human, Mouse, Rat	KCB2288
Phospho-Histone H3 (S10)	Human, Mouse, Rat	KCB7798
Total HO-1/HMOX1	Human, Mouse	KCB3776
Phospho-JNK Pan Specific	Human, Mouse, Rat	DYC1387B-2
Phospho-IκB-α (S32/S36)	Human	KCB4809
Phospho-c-Jun (S63)	Human, Mouse, Rat	KCB7499
Total iNOS	Human	KCB9502
Phospho-p38 MAP Kinase (T180/Y182)	Human, Mouse, Rat	KCB869
Phospho-p70 S6 Kinase (T389)	Human, Mouse	KCB8963
Phospho-PDGF Rβ (Y751)	Human	KCB1767
Phospho-PDGF Rβ (Y1021)	Human	KCB2316
Phospho-PRAS40 (T246)	Human, Mouse	KCB6890
Phospho-Progesterone R/NR3C3 (S294)	Human	KCB5955
Phospho-RelA/NFκB p65 (S536)	Human, Mouse, Rat	KCB7226
Phospho-RSK1 (S380)	Human	DYC892B-2
Phospho-Smad1 (S463/S465)/Smad5 (S463/S465)	Human, Mouse	KCB7660
Phospho-STAT1 (Y701)	Human	KCB2894
Phospho-STAT2 (Y689)	Human	KCB2890
Phospho-STAT3 (Y705)	Human, Mouse	KCB4607
Phospho-STAT5a/b (Y694/Y699)	Human, Mouse	KCB4190
Phospho-STAT6 (Y641)	Human, Mouse	KCB3717
Phospho-Tie-2 (Y992)	Human	KCB2720
Phospho-TrkA (Y785)	Rat	KCB5479
Phospho-VASP (S157)	Human, Mouse, Rat	KCB8019