

PhosphoSens Lysate Kinase Activity Assays
Real-Time Protein Kinase Activity Assays in Complex Biological Samples



Search Below to Match Your Target With Kinase-Selective Lysate Substrate

Cell Lysate Assay Kit (AQTxxxx-KL-100):
Each kit includes sufficient volumes of substrate, reaction reagents, cell extraction reagents and controls to perform **100 reactions** at 15 μ M substrate in a 384-well plate (25 μ L reaction volume). Includes PhosphoSens kinase-selective lysate substrates, reaction reagents, cell extraction reagents and assay controls.

Cell Lysate Assay Kit (AQTxxxx-KL-1000):
Each kit includes sufficient volumes of substrate, reaction reagents, cell extraction reagents and controls to perform **1,000 reactions** at 15 μ M substrate in a 384-well plate (25 μ L reaction volume). Includes PhosphoSens kinase-selective lysate substrates, reaction reagents, and cell extraction reagents.

Kinase-Selective Lysate Substrate (AQTxxxx-L):
AssayQuant's Cell Lysate Kinase Assays combine PhosphoSens Detection Technology with high-throughput peptide synthesis to design sensor peptide substrates that are highly selective for your targets of interest. Each Kinase-Selective Lysate Substrate can be purchased as lyophilized 1mg aliquots. Each mg is sufficient for **1,500 reactions** at 15 μ M substrate in a 384-well plate (25 μ L reaction volume).

Target Name	HGNC Approved Full Name	Kinase-Selective Lysate Substrate	Substrate MW (g/mol)	Assay Validation Report
ERK1/2	mitogen-activated protein kinase (MAPK3/1)	AQT1076	2373.0	LINK >
AKT1/2/3	AKT serine/Threonine Kinase 1/2/3	AQT0982	3204.7	LINK >
GSK3A/B	glycogen synthase kinase 3 alpha/beta	AQT1211	2005.9	LINK >
DNA-PK	protein kinase, DNA-activated, catalytic subunit	AQT0440	1963.1	LINK >
JNK	mitogen-activated protein kinase	AQT1196	3162.3	LINK >

PhosphoSens ERK1/2 Cell Lysate Kinase Assay Kit		AQT-AQT1076-KL-100	AQT-AQT1076-KL-1000	AQT-AQT1076-L-01 & AQT-LRP
Components	Description	100 Assay Kit Volumes	1,000 Assay Kit Volumes	Selective Substrate System Volumes (2,000 assays)
PhosphoSens Kinase-Selective Lysate Substrate, AQT1076, 1mM	ERK1/2 selective sensor peptide substrate for assaying kinase activity in complex biological samples	45 μ L	420 μ L	1mg
ATP Solution, 100 mM	100 mM ATP in nuclease-free water	30 μ L	300 μ L	600 μ L
DTT Solution, 1 M	1 M DTT in nuclease-free water	5 μ L	30 μ L	60 μ L
Enzyme Reaction Buffer (ERB), 10X	500 mM HEPES, pH 7.5, 0.1% Brij-35, 100 mM MgCl ₂	300 μ L	3,000 μ L	6,000 μ L
Enzyme Dilution Buffer (EDB), 5X Base	20 mM HEPES, pH 7.5, 0.01% Brij-35, 5% Glycerol, 1 mg/mL Bovine Serum Albumin (BSA)	800 μ L	8,000 μ L	16,000 μ L
EGTA Solution, 550 mM	550 mM EGTA in water (pH adjusted with NaOH)	30 μ L	300 μ L	600 μ L
PhosphoPreserve Cell Extraction Buffer, 1X Base	Please reach out to support@assayquant.com to inquire	1,000 μ L	3,000 μ L	6000 μ L
PhosphoPreserve Phosphatase Inhibitor Cocktail - 1, 100X	Please reach out to support@assayquant.com to inquire	20 μ L	60 μ L	120 μ L
PhosphoPreserve Phosphatase Inhibitor Cocktail - 3, 60X	Please reach out to support@assayquant.com to inquire	20 μ L	60 μ L	120 μ L
PhosphoPreserve Protease Inhibitor Cocktail, 60X	Please reach out to support@assayquant.com to inquire	20 μ L	60 μ L	120 μ L
PhosphoSens PhosphoControl Peptide, AQT1107, 1 mM	Fully phosphorylated version of the ERK1/2 selective sensor peptide substrate, AQT1076.	10 μ L	Not Included	Not Included
NH3T3 Lysate (+PDGF)	Crude lysate of NH3T3 cells treated with 25 ng/mL of PDGF after an overnight serum depletion to make the cells quiescent. Lysate is in PhosphoPreserve CEB, supplemented with DTT, and PhosphoPreserve Protease and Phosphatase inhibitor cocktails.	25 μ L	Not Included	Not Included
ERK2 (Full Length, GST Tag)	Recombinant Human ERK2 Protein (Full Length, GST Tag), Active stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, 25% glycerol.	2 μ L	Not Included	Not Included
SCH72984, 10 mM	SCH72984 resuspended in 100% DMSO	5 μ L	Not Included	Not Included

Controls that are not included in can be purchased separately. Please contact us at orders@assayquant.com if you would like to request a quote.
*Concentrations for purified and endogenous control samples can be found in the Certificate of Analysis (CoA) for your kit. Please contact us at support@assayquant.com if you would like an electronic copy.

PhosphoSens AKT1/2/3 Cell Lysate Kinase Assay Kit		AQT-AQT0982-KL-100	AQT-AQT0982-KL-1000	AQT-AQT0982-L-01 & AQT-LRP
Components	Description	100 Assay Kit Volumes	1,000 Assay Kit Volumes	Selective Substrate System Volumes
PhosphoSens Kinase-Selective Lysate Substrate, AQT0982, 1mM	AKT1/2/3 selective sensor peptide substrate for assaying kinase activity in complex biological samples	45 μ L	420 μ L	1mg
ATP Solution, 100 mM	100 mM ATP in nuclease-free water	30 μ L	300 μ L	600 μ L
DTT Solution, 1 M	1 M DTT in nuclease-free water	5 μ L	30 μ L	60 μ L
Enzyme Reaction Buffer (ERB), 10X	500 mM HEPES, pH 7.5, 0.1% Brij-35, 100 mM MgCl ₂	300 μ L	3,000 μ L	6,000 μ L
Enzyme Dilution Buffer (EDB), 5X Base	20 mM HEPES, pH 7.5, 0.01% Brij-35, 5% Glycerol, 1 mg/mL Bovine Serum Albumin (BSA)	800 μ L	8,000 μ L	16,000 μ L
EGTA Solution, 550 mM	550 mM EGTA in water (pH adjusted with NaOH)	30 μ L	300 μ L	600 μ L
PhosphoPreserve Cell Extraction Buffer, 1X Base	Please reach out to support@assayquant.com to inquire	1,000 μ L	3,000 μ L	6000 μ L
PhosphoPreserve Phosphatase Inhibitor Cocktail - 1, 100X	Please reach out to support@assayquant.com to inquire	20 μ L	60 μ L	120 μ L
PhosphoPreserve Phosphatase Inhibitor Cocktail - 3, 60X	Please reach out to support@assayquant.com to inquire	20 μ L	60 μ L	120 μ L
PhosphoPreserve Protease Inhibitor Cocktail, 60X	Please reach out to support@assayquant.com to inquire	20 μ L	60 μ L	120 μ L
PhosphoSens PhosphoControl Peptide, AQT1146, 1 mM	Fully phosphorylated version of the AKT1/2/3 selective sensor peptide substrate, AQT0982.	10 μ L	Not Included	Not Included
NH3T3 Lysate (+PDGF)	Crude lysate of NH3T3 cells treated with 50 ng/mL of PDGF after an overnight serum depletion to make the cells quiescent. Lysate is in PhosphoPreserve CEB, supplemented with DTT, and PhosphoPreserve Protease and Phosphatase inhibitor cocktails.	25 μ L	Not Included	Not Included
Pre-activated AKT1*	AKT activated with a lipid/detergent mix, MK2, and PDK1	2 μ L	Not Included	Not Included
Rizavastib (A-443654)	Rizavastib (A-443654) resuspended in 100% DMSO	5 μ L	Not Included	Not Included
Everolimus (sirolimus) (ARQ 751) (mTORinhibitor)	Everolimus (sirolimus) (ARQ 751) (mTORinhibitor) resuspended in 100% DMSO	5 μ L	Not Included	Not Included

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PhosphoSens GSK3A/B Cell Lysate Kinase Assay Kit		AQT-AQT1211-KL-100	AQT-AQT1211-KL-1000	AQT-AQT1211-L-01 & AQT-LRP
Components	Description	100 Assay Kit Volumes	1,000 Assay Kit Volumes	Selective Substrate System Volumes
PhosphoSens Kinase-Selective Lysate Substrate, AQT1211, 1mM	GSK3A/B selective sensor peptide substrate for assaying kinase activity in complex biological samples	45 μ L	420 μ L	1mg
ATP Solution, 100 mM	100 mM ATP in nuclease-free water	30 μ L	300 μ L	600 μ L
DTT Solution, 1 M	1 M DTT in nuclease-free water	5 μ L	30 μ L	60 μ L
Enzyme Reaction Buffer (ERB), 10X	500 mM HEPES, pH 7.5, 0.1% Brij-35, 100 mM MgCl ₂	300 μ L	3,000 μ L	6,000 μ L
Enzyme Dilution Buffer (EDB), 5X Base	20 mM HEPES, pH 7.5, 0.01% Brij-35, 5% Glycerol, 1 mg/mL Bovine Serum Albumin (BSA)	800 μ L	8,000 μ L	16,000 μ L
EGTA Solution, 550 mM	550 mM EGTA in water (pH adjusted with NaOH)	30 μ L	300 μ L	600 μ L
PhosphoPreserve Cell Extraction Buffer, 1X Base	Please reach out to support@assayquant.com to inquire	1,000 μ L	3,000 μ L	6000 μ L
PhosphoPreserve Phosphatase Inhibitor Cocktail - 1, 100X	Please reach out to support@assayquant.com to inquire	20 μ L	60 μ L	120 μ L
PhosphoPreserve Phosphatase Inhibitor Cocktail - 3, 60X	Please reach out to support@assayquant.com to inquire	20 μ L	60 μ L	120 μ L
PhosphoPreserve Protease Inhibitor Cocktail, 60X	Please reach out to support@assayquant.com to inquire	20 μ L	60 μ L	120 μ L
PhosphoSens PhosphoControl Peptide, AQT1158, 1 mM	Fully phosphorylated version of the GSK3A/B selective sensor peptide substrate, AQT1211.	10 μ L	Not Included	Not Included
A375 Lysate Control*	Crude lysate of A375 cells in PhosphoPreserve CEB, supplemented with DTT, and PhosphoPreserve Protease and Phosphatase inhibitor cocktails.	25 μ L	Not Included	Not Included
GSK3B (Full Length, HIS Tag)	Recombinant Human GSK3B Protein (Full Length, HIS Tag), Active stored in 50 mM Tris-HCl, pH 7.5, 50-300mM NaCl, 10mM glutathione, 0.1mM EDTA, 0.25-1.0mM DTT, 0-0.1mM PMSF, 10-25% glycerol.	2 μ L	Not Included	Not Included
LY2939314, 10 mM	LY2939314 resuspended in 100% DMSO	5 μ L	Not Included	Not Included

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PhosphoSens DNA-PK Cell Lysate Kinase Assay Kit		AQT-AQT1211-KL-100	AQT-AQT1211-KL-1000	AQT-AQT1211-L-01 & AQT-LRP
Components	Description	100 Assay Kit Volumes	1,000 Assay Kit Volumes	Selective Substrate System Volumes
PhosphoSens Kinase-Selective Lysate Substrate, AQT0440, 1mM	DNA-PK-selective sensor peptide substrate for assaying kinase activity in complex biological samples	45 µL	420 µL	1mg
ATP Solution, 100 mM	100 mM ATP in nuclease-free water	30 µL	300 µL	600 µL
DTT Solution, 1 M	1 M DTT in nuclease-free water	5 µL	30 µL	60 µL
Enzyme Reaction Buffer (ERB), 10X	500 mM HEPES, pH 7.5, 0.1% Brij-35, 100 mM MgCl ₂	300 µL	3,000 µL	6,000 µL
Enzyme Dilution Buffer (EDB), 5X Base	20 mM HEPES, pH 7.5, 0.01% Brij-35, 5% Glycerol, 1 mg/mL Bovine Serum Albumin (BSA)	800 µL	8,000 µL	16,000 µL
EGTA Solution, 550 mM	550 mM EGTA in water (pH adjusted with NaOH)	30 µL	300 µL	600 µL
PhosphoPreserve Cell Extraction Buffer, 1X Base	Please reach out to support@assayquant.com to inquire	1,000 µL	3,000 µL	6,000 µL
PhosphoPreserve Phosphatase Inhibitor Cocktail - 1, 100X	Please reach out to support@assayquant.com to inquire	20 µL	60 µL	120 µL
PhosphoPreserve Phosphatase Inhibitor Cocktail - 2, 60X	Please reach out to support@assayquant.com to inquire	20 µL	60 µL	120 µL
PhosphoPreserve Protease Inhibitor Cocktail, 60X	Please reach out to support@assayquant.com to inquire	20 µL	60 µL	120 µL
PhosphoSens PhosphoControl Peptide, AQT0442, 1 mM	Fully phosphorylated version of the DNA-PK-selective sensor peptide substrate, AQT0440.	10 µL	Not Included	Not Included
HCC1143 Lysate Control	Crude lysate of HCC1143 cells in PhosphoPreserve CEB, supplemented with DTT, and PhosphoPreserve Protease and Phosphatase inhibitor cocktails.	10 µL	Not Included	Not Included
DNA-PK Inhibitor: AZD-7648, 10 mM	AZD-7648 resuspended in 100% DMSO	5 µL	Not Included	Not Included

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PhosphoSens JNK Cell Lysate Kinase Assay Kit		AQT-AQT1211-KL-100	AQT-AQT1211-KL-1000	AQT-AQT1211-L-01 & AQT-LRP
Components	Description	100 Assay Kit Volumes	1,000 Assay Kit Volumes	Selective Substrate System Volumes
PhosphoSens Kinase-Selective Lysate Substrate, AQT1196, 1mM	JNK-selective sensor peptide substrate for assaying kinase activity in complex biological samples	45 µL	420 µL	1mg
ATP Solution, 100 mM	100 mM ATP in nuclease-free water	30 µL	300 µL	600 µL
DTT Solution, 1 M	1 M DTT in nuclease-free water	5 µL	30 µL	60 µL
Enzyme Reaction Buffer (ERB), 10X	500 mM HEPES, pH 7.5, 0.1% Brij-35, 100 mM MgCl ₂	300 µL	3,000 µL	6,000 µL
Enzyme Dilution Buffer (EDB), 5X Base	20 mM HEPES, pH 7.5, 0.01% Brij-35, 5% Glycerol, 1 mg/mL Bovine Serum Albumin (BSA)	800 µL	8,000 µL	16,000 µL
EGTA Solution, 550 mM	550 mM EGTA in water (pH adjusted with NaOH)	30 µL	300 µL	600 µL
PhosphoPreserve Cell Extraction Buffer, 1X Base	Please reach out to support@assayquant.com to inquire	1,000 µL	3,000 µL	6,000 µL
PhosphoPreserve Phosphatase Inhibitor Cocktail - 1, 100X	Please reach out to support@assayquant.com to inquire	20 µL	60 µL	120 µL
PhosphoPreserve Phosphatase Inhibitor Cocktail - 2, 60X	Please reach out to support@assayquant.com to inquire	20 µL	60 µL	120 µL
PhosphoPreserve Protease Inhibitor Cocktail, 60X	Please reach out to support@assayquant.com to inquire	20 µL	60 µL	120 µL
PhosphoSens PhosphoControl Peptide, AQT1232, 1 mM	Fully phosphorylated version of the JNK-selective sensor peptide substrate, AQT1196.	10 µL	Not Included	Not Included
HEK293 Lysate Control*	Crude lysate of HEK293 cells (passage 17) +/- 3 µM Anisomycin. In PhosphoPreserve CEB, supplemented with DTT, and PhosphoPreserve Protease and Phosphatase inhibitor cocktails.	25 µL	Not Included	Not Included
JNK Inhibitor: JNK-IN-8, 10 mM	JNK-IN-8 resuspended in 100% DMSO	5 µL	Not Included	Not Included

Controls that are not included in can be purchased separately. Please contact us at orders@assayquant.com if you would like to request a quote.
 *Concentrations for purified and endogenous control samples can be found in the Certificate of Analysis (CoA) for your kit. Please contact us at support@assayquant.com if you would like an electronic copy.

PhosphoSens Cell Lysate Kinase Assay Reagent Pack		AQT-LRP-01
Components	Description	1,500 Assay Reagent Pack
ATP Solution, 100 mM	100 mM ATP in nuclease-free water	600 µL
DTT Solution, 1 M	1 M DTT in nuclease-free water	60 µL
Enzyme Reaction Buffer (ERB), 10X	500 mM HEPES, pH 7.5, 0.01% Brij-35, 100 mM MgCl ₂	6,000 µL
Enzyme Dilution Buffer (EDB), 5X Base	20 mM HEPES, pH 7.5, 0.01% Brij-35, 5% Glycerol, 1 mg/mL Bovine Serum Albumin (BSA)	16,000 µL
EGTA Solution, 550 mM	550 mM EGTA in water (pH adjusted with NaOH)	600 µL
PhosphoPreserve Cell Extraction Buffer, 1X Base	Please reach out to support@assayquant.com to inquire	6000 µL
PhosphoPreserve Phosphatase Inhibitor Cocktail - 1, 100X	Please reach out to support@assayquant.com to inquire	120 µL
PhosphoPreserve Phosphatase Inhibitor Cocktail - 2, 60X	Please reach out to support@assayquant.com to inquire	120 µL
PhosphoPreserve Protease Inhibitor Cocktail, 60X	Please reach out to support@assayquant.com to inquire	120 µL