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#7288**PathScan® Phospho-IRS-1 (Ser307)
Sandwich ELISA Antibody Pair**

UniProt ID: #P35568 Entrez-Gene Id: #3667

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For Research Use Only. Not for Use in Diagnostic Procedures.**Description**

CST's PathScan® Phospho-IRS-1 (Ser307) Sandwich ELISA Antibody Pair is being offered as an economical alternative to our PathScan® Phospho-IRS-1 (Ser307) Sandwich ELISA Kit #7287. Capture and detection antibodies (100X stocks) and an HRP-conjugated secondary antibody (1000X stock) are supplied. Sufficient reagents are supplied for 4 x 96 well ELISAs. The IRS-1 Mouse Capture Antibody is coated in PBS overnight in a 96 well microplate. After blocking, cell lysate is added followed by a Phospho-IRS-1 (Ser307) Rabbit Detection Antibody and an HRP-conjugated, Anti-Rabbit IgG Antibody. HRP substrate (TMB) is added for color development. The magnitude of the absorbance for this developed color is proportional to the quantity of IRS-1 phosphorylated at Ser307.

*Antibodies in this kit are custom formulations specific to the kit.

Reagents Not Supplied

Phosphate Buffered Saline (PBS-20X) #9808 Phosphate Buffered Saline with Tween-20 (PBST-20X) #9809 Cell Lysis Buffer (10X) #9803 TMB Substrate #7004 STOP Solution #7002 Blocking Buffer: 1X PBS/0.05% Tween-20, 1% BSA 96 Well Microplates** Microplate Reader ** Antibody Pairs have been validated on Corning® 96 Well Clear Polystyrene High Bind Stripwell™ Microplates (#2592) and Corning® 96 Well EIA/RIA Easy Wash™ Clear Flat Bottom Polystyrene High Bind Microplates (#3369).

Background

Insulin receptor substrate 1 (IRS-1) is one of the major substrates of the insulin receptor kinase (1). IRS-1 contains multiple tyrosine phosphorylation motifs that serve as docking sites for SH2-domain containing proteins that mediate the metabolic and growth-promoting functions of insulin (2-4). IRS-1 also contains over 30 potential serine/threonine phosphorylation sites. Ser307 of IRS-1 is phosphorylated by JNK (5) and IKK (6) while Ser789 is phosphorylated by SIK-2, a member of the AMPK family (7). The PKC and mTOR pathways mediate phosphorylation of IRS-1 at Ser612 and Ser636/639, respectively (8,9). Phosphorylation of IRS-1 at Ser1101 is mediated by PKCθ and results in an inhibition of insulin signaling in the cell, suggesting a potential mechanism for insulin resistance in some models of obesity (10).

Background References

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Revision 1

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