



Product Data Sheet

Product Name: Insulin Receptor (1142-1153), pTyr(1146, 1150, 1151)
Catalog Number: AS-20272 (1 mg) Lot Number: See label on vial
AS-24500 (5 mg)

Sequence: H-Thr-Arg-Asp-Ile-pTyr-Glu-Thr-Asp-pTyr-pTyr-Arg-Lys-OH
(3-letter code)
TRDI-pY-ETD-pY-pY-RK (1-letter code)

Molecular Weight: 1863.8

% Peak Area by HPLC: ≥ 95

Appearance: Lyophilized white powder

Peptide Reconstitution: Reconstitute by adding 80-100 µl 1%NH₄OH to 1 mg Insulin receptor (1142-1153). Dilute this peptide solution to approximately 1 mg/ml (or more dilute) with a buffer such as PBS or another buffer; aliquot and store at -20°C.

Storage: Insulin receptor peptide is shipped at ambient temperature. Upon receipt, store lyophilized peptide at -20°C or lower. Reconstituted peptide can be aliquoted and stored at -20°C or lower.

Description: Peptides are used as insulin receptor tyrosine kinase substrates. Ref: Keane, N. et al. *Eur. J. Biochem.* **226**, 525 (1994); Stadtmauer, L. and O. Rosen, *J. Biol. Chem.* **261**, 3402 (1986).

Additional Information: Listed below are relevant information that may provide a guideline on how to use this product. End users will have to adapt to their own specific applications.

Kinase domain of insulin receptor unphosphorylated (TRDIYETDYYRK; pI = 6.2), monophosphorylated (TRDIYED-pY-YRK), and triphosphorylated (TRDI-pY-ETD-pY-pY-RK) was purchased from ANASPEC (San Jose, CA). Infusion was carried out at a rate of 3.3 nL/sec through a 20-µL Hamilton syringe held at a potential of -2.5 keV. HGLDNYR, HGLDN(p)YR; kinase domain of insulin receptor (TRDIYETDYYRK) unphosphorylated, monophosphorylated, and triphosphorylated; and the α- and β-casein tryptic digests were electrosprayed at concentrations ranging from 500 pM to 100 nM, which are delineated in the text [Flora, JW. and DC. Muddiman. Anal. Chem. 73, 3305 \(2001\).](#)

Phosphotyrosyl dodecapeptide, TRDIpYETDpYpYPRK, corresponding to amino acids 1142-1153 of the insulin receptor regulatory domain, was custom-synthesized by AnaSpec (San Jose, CA). To confirm the inhibitory activity of the compounds selected from the initial HTS, an assay based on the dodecapeptide substrate was performed, where the release of inorganic phosphate was monitored by the malachite green-ammonium molybdate method. After preincubation (10 min at 37 °C) of the enzyme (0.5 µg) with or without inhibitors in a buffer containing 30 mM Tris-HCl (pH 7.4), 2 mM EDTA and 1 mM dithiothreitol (total reaction volume: 395 µl), aliquots (39.5 µl) were taken and incubated with the peptide substrate (final concentration: 50 µM) for 30 min at 37 °C-[Cheon, HG. et al. Euro. J. Pharmacol. 485, 333 \(2004\).](#)

Published Citations:

Flora, JW. and DC. Muddiman. *Anal. Chem.* **73**, 3305 (2001).

Cheon, HG. et al. *Euro. J. Pharmacol.* **485**, 333 (2004).

Panchagnula, V. et al. *J. Chromatography A* **1155**, 112 (2007).

Related Products:

Name	Cat #	Size
Insulin Receptor (1142-1153), pTyr(1146, 1150, 1151), Biotinylated (Biotin-TRDI-pY-ETD-pY-pY-RK)	AS-23910	1 mg
	AS-23911	5 mg
Insulin Receptor (1142-1153), pTyr114 (TRDI-pY-ETDYRK)	AS-20292	1 mg
	AS-24503	5 mg
Insulin Receptor (1142-1153), pTyr1146, Biotinylated (Biotin-TRDI-pY-ETDYRK)	AS-23725	1 mg
	AS-23726	5 mg
Phosphopeptide Mass Spec Standards	AS-61145	1 kit

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