Product Data Sheet

Product Name:	INSR Human
Cat. No.:	GP20677
Batch No.:	1

Product Data

Purity	>98%	Source	HEK 293.
Phycical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Insulin receptor; IR; EC 2.7.10.1; CD220; INSR; HHF5.		
Amino Acid Sequence	ASHLYPGEVC PGMDIRNNLT RLHELENCSV IEGHLQILLM FKTRPEDFRD LSFPKLIMIT DYLLLFRVYG LESLKDLFPN LTVIRGSRLF FNYALVIFEM VHLKELGLYN LMNITRGSVR IEKNNELCYL ATIDWSRILD SVEDNYIVLN KDDNEECGDI CPGTAKGKTN CPATVINGQF VERCWTHSHC QKVCPTICKS HGCTAEGLCC HSECLGNCSQ PDDPTKCVAC RNFYLDGRCV ETCPPPYYHF QDWRCVNFSF CQDLHHKCKN SRRQGCHQYV IHNNKCIPEC PSGYTMNSSN LLCTPCLGPC PKVCHLLEGE KTIDSVTSAQ ELRGCTVING SLIINIRGGN NLAAELEANL GLIEEISGYL KIRRSYALVS LSFFRKLRLI RGETLEIGNY SFYALDNQNL RQLWDWSKHN LTITQGKLFF HYNPKLCLSE IHKMEEVSGT KGRQERNDIA LKTNGDQASC ENELLKFSYI RTSFDKILLR WEPYWPPDFR DLLGFMLFYK EAPYQNVTEF DGQDACGSNS WTVVDIDPPL RSNDPKSQNH PGWLMRGLKP WTQYAIFVKT LVTFSDERRT YGAKSDIIYV QTDATNPSVP LDPISVSNSS SQIILKWKPP SDPNGNITHY LVFWERQAED SELFELDYCL KGLKLPSRTW SPPFESEDSQ KHNQSEYEDS AGECCSCPKT DSQILKELEE SSFRKTFEDY LHNVVFVPRP SRKRRSLGDV GNVTVAVPTV AAFPNTSSTS VPTSPEEHRP FEKVVNKESL VISGLRHFTG YRIELQACNQ DTPEERCSVA AYVSARTMPE AKADDIVGPV THEIFENNVV HLMWQEPKEP NGLIVLYEVS YRRYGDEELH LCVSRKHFAL ERGCRLRGLS PGNYSVRIRA TSLAGNGSWT EPTYFYVTDY LDVPSNIAKK LHHHHHH.		
Solubility	It is recommended to add deionized water to a working concentration of 0.5mg/ml and let the lyophilized pellet dissolve completely. INSR is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.		

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Formulation	INSR was filtered (0.4μm) and lyophilized from 0.5mg/ml in 0.05M phosphate buffer and 0.075M NaCl, pH 7.4.

Introduction

Insulin Receptor (INSR) is a receptor tyrosine kinase which mediates the pleiotropic actions of insulin. Binding of insulin to the insulin receptor (INSR) stimulates glucose uptake. Once the precursor signal peptide is removed, the insulin receptor precursor is post-translationally cleaved into 2 chains (alpha and beta) which are covalently linked. Insulin binding initiates phosphorylation of several intracellular substrates, including, insulin receptor substrates (IRS1, 2, 3, 4), SHC, GAB1, CBL and other signaling intermediates. Each of these phosphorylated proteins function as docking proteins for other signaling proteins which contain Src-homology-2 domains (SH2 domain) that specifically recognize different phosphotyrosines residues, including the p85 regulatory subunit of PI3K and SHP2.

Stability

Store lyophilized protein at -20°C . Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time.

Background

Insulin Receptor Human Recombinant produced in HEK cells is a single, glycosylated, polypeptide chain (aa 28-944 of the short isoform- HIR-A, Uniprot accession # P06213-2 which includes the whole subunit alpha and extracellular domain of subunit beta) containing a total of 927 amino acids, having a molecular mass of 105.9kDa (calculated), though it migrates at approximately 160kDa on SDS PAGE, the INSR is fused to a 2 a.a N-terminal linker, a 2 a.a C-terminal linker and fused to a 6 a.a His tag at C-Terminus.The Human INSR is purified by proprietary chromatographic techniques.

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