

OXSRI Protein, Human (sf9, GST)

Cat. No.:	HY-P77119
Synonyms:	Serine/threonine-protein kinase OSR1; Oxidative stress-responsive 1 protein; KIAA1101; OSR1
Species:	Human
Source:	Sf9 insect cells
Accession:	O95747 (M1-S527)
Gene ID:	9943
Molecular Weight:	Approximately 80 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 50 mM Tris, 100 mM NaCl, pH 8.0, 0.5 mM GSH, 0.5 mM PMSF, 0.5 mM EDTA, 10% glycerol
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	<p>OXSRI Protein functions as a key effector serine/threonine-protein kinase in the WNK-SPAK/OSR1 cascade, participating in diverse cellular processes such as ion transport, response to hypertonic stress, and blood pressure regulation. It recognizes and binds proteins with a RFXV motif, acting downstream of WNK kinases to phosphorylate ion cotransporters including SLC12A1/NKCC2, SLC12A2/NKCC1, SLC12A3/NCC, SLC12A5/KCC2, and SLC12A6/KCC3, thereby modulating their activity. OXSRI mediates regulatory volume increase in response to hyperosmotic stress and regulates NaCl reabsorption in the distal nephron by phosphorylating the thiazide-sensitive Na-Cl cotransporter SLC12A3/NCC. Additionally, it serves as a regulator of angiogenesis in endothelial cells and activates inward rectifier potassium channels KCNJ2/Kir2.1 and KCNJ4/Kir2.3 downstream of WNK1, influencing their membrane localization. OXSRI also plays a role in phosphorylating various substrates, including RELL1, RELL2, RELT, PAK1, and PLSCR1 in the presence of RELT.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA