

Recombinant Human OXSR1/OSR1 Protein (GST Tag)

Catalog Number: PKSH030391

Note: Centrifuge before opening to ensure complete recovery of vial contents.

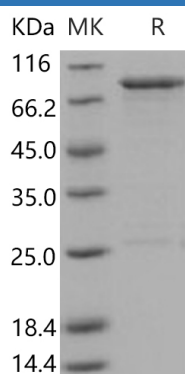
Description

Species	Human
Source	Baculovirus-Insect Cells-derived Human OXSR1/OSR1 protein Met 1-Ser 527, with an N-terminal GST
Mol_Mass	84.0 kDa
Accession	NP_005100.1
Bio-activity	Not validated for activity

Properties

Purity	> 88 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
Shipping	This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < -20°C.
Formulation	Supplied as sterile solution of 50mM Tris, 100mM NaCl, pH 8.0, 0.5mM GSH, 0.5mM PMSF, 0.5mM EDTA, 10% glycerol
Reconstitution	Not Applicable

Data



> 88 % as determined by reducing SDS-PAGE.

Background

Oxidative stress-responsive 1 protein (OXSR1), also known as Serine/threonine-protein kinase OSR1, is a member of the Ser/Thr protein kinase family of proteins. OXSR1 regulates downstream kinases in response to environmental stress, and may play a role in regulating the actin cytoskeleton. OXSR1 is a 58 kDa protein of 527 amino acids that is widely expressed in mammalian tissues and cell lines. The amino acid (aa) sequence of the predicted OXSR1 protein is 39% identical to that of human SOK1. Of potential regulators surveyed, endogenous OXSR1 is activated only by osmotic stresses, notably sorbitol and to a lesser extent NaCl. OXSR1 did not increase the activity of coexpressed JNK, nor did it activate three other MAPKs, p38, ERK2, and ERK5. Phosphorylation by OXSR1 modulates the Gprotein sensitivity of PAK isoforms. The OXSR1 and SPAK are key enzymes in a signalling cascade regulating the activity of Na⁺/K⁺/2Cl⁻ co-transporters (NKCCs) in response to osmotic stress. Both kinases have a conserved carboxy-terminal (CCT) domain, which recognizes a unique peptide (Arg-Phe-Xaa-Val) motif. The OXSR1 and SPAK kinases specifically recognize their upstream activators and downstream substrates.

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Toll-free: 1-888-852-8623
Web: www.elabscience.com

Tel: 1-832-243-6086
Email: techsupport@elabscience.com

Fax: 1-832-243-6017