Recombinant Human OXSR1/OSR1 Protein (GST Tag)

Catalog Number: PKSH030391

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

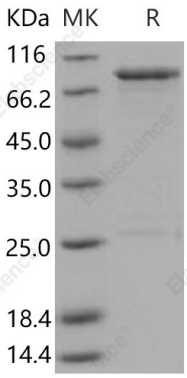
Description

Species	Human
Source	Baculovirus-Insect Cells-derived Human OXSR1/OSR1 protein Met 1-Ser 527, with an N-terminal GST
Calculated MW	84 kDa
Observed MW	80 kDa
Accession	NP_005100.1
Bio-activity	Not validated for activity

Properties

Purity	> 88% as determined by reducing SDS-PAGE.
Concentration	Subject to label value.
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 50 mM Tris, 100 mM NaCl, pH 8.0, 0.5 mM GSH, 0.5 mM PMSF, 0.5 mM EDTA, 10% glycerol

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 G protein 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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