

Human OXSR1 / OSR1 Protein (GST Tag)

Catalog Number: 10727-H09B



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

OSR1; 2210022N24Rik; 2810422B09Rik; AI462649; AW209236; mKIAA1101; Osr1

Protein Construction:

A DNA sequence encoding the full length of human OXSR1 (NP_005100.1) (Met 1-Ser 527) was fused with the GST tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 88 % as determined by SDS-PAGE

Bio Activity:

Kinase activity untested

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human GST/OXSR1 chimera consists of 752 amino acids and predicts a molecular mass of 84 kDa. It migrates as an approximately 80 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Supplied as sterile 50mM Tris, 100mM NaCl, pH 8.0, 0.5mM GSH, 0.5mM PMSF, 0.5mM EDTA, 10% glycerol

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

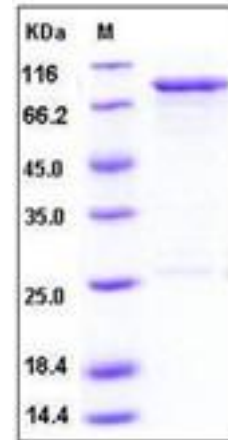
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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.

References

1. Tamari M., *et al.*, (1999), Isolation and characterization of a novel serine threonine kinase gene on chromosome 3p22-21.3. *J. Hum. Genet.* 44:116-120.
2. Kikuno R., *et al.*, (1999), Prediction of the coding sequences of unidentified human genes. XIV. The complete sequences of 100 new cDNA clones from brain which code for large proteins in vitro. *DNA Res.* 6:197-205.
3. Chen W., *et al.*, (2004), Characterization of OSR1, a member of the mammalian Ste20p/germinal center kinase subfamily. *J. Biol. Chem.* 279:11129-11136.

Manufactured By Sino Biological Inc., FOR RESEARCH USE ONLY. NOT FOR USE IN HUMANS.

Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>