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# Anti-OXSR1 Antibody

Catalog # AP53723

## Product Information

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|---|---|
| **Application** | WB, IF/IC |
| **Primary Accession** | O95747 |
| **Reactivity** | Human, Mouse, Rat, Bovine |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 58022 |

## Additional Information

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| **Gene ID** | 9943 |
| **Other Names** | KIAA1101; OSR1; Serine/threonine-protein kinase OSR1; Oxidative stress-responsive 1 protein |
| **Target/Specificity** | KLH-conjugated synthetic peptide encompassing a sequence within the center region of human OXSR1. The exact sequence is proprietary. |
| **Dilution** | WB~~1/500 - 1/1000 IF/IC~~N/A |
| **Format** | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide. |
| **Storage** | Store at -20 °C.Stable for 12 months from date of receipt |

## Protein Information

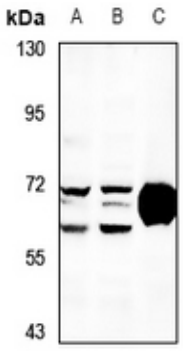
| | |
|---|---|
| **Name** | OXSR1 ( HGNC:8508) |
| **Function** | Effector serine/threonine-protein kinase component of the WNK-SPAK/OSR1 kinase cascade, which is involved in various processes, such as ion transport, response to hypertonic stress and blood pressure (PubMed:16669787, PubMed:18270262, PubMed:21321328, PubMed:34289367). Specifically recognizes and binds proteins with a RFXV motif (PubMed:16669787, PubMed:17721439, PubMed:21321328). Acts downstream of WNK kinases (WNK1, WNK2, WNK3 or WNK4): following activation by WNK kinases, catalyzes phosphorylation of ion cotransporters, such as SLC12A1/NKCC2, SLC12A2/NKCC1, SLC12A3/NCC, SLC12A5/KCC2 or SLC12A6/KCC3, regulating their activity (PubMed:17721439). Mediates regulatory volume increase in response to hyperosmotic stress by catalyzing phosphorylation of ion cotransporters SLC12A1/NKCC2, SLC12A2/NKCC1 and SLC12A6/KCC3 downstream of WNK1 and WNK3 kinases (PubMed:16669787, PubMed:21321328). Phosphorylation of Na-K-Cl cotransporters SLC12A2/NKCC1 and SLC12A2/NKCC1 promote their activation and ion influx; |

simultaneously, phosphorylation of K-Cl cotransporters SLC12A5/KCC2 and SLC12A6/KCC3 inhibit their activity, blocking ion efflux (PubMed:16669787, PubMed:19665974, PubMed:21321328). Acts as a regulator of NaCl reabsorption in the distal nephron by mediating phosphorylation and activation of the thiazide-sensitive Na-Cl cotransporter SLC12A3/NCC in distal convoluted tubule cells of kidney downstream of WNK4 (PubMed:18270262). Also acts as a regulator of angiogenesis in endothelial cells downstream of WNK1 (PubMed:23386621, PubMed:25362046). Acts as an activator of inward rectifier potassium channels KCNJ2/Kir2.1 and KCNJ4/Kir2.3 downstream of WNK1: recognizes and binds the RXFXV/I variant motif on KCNJ2/Kir2.1 and KCNJ4/Kir2.3 and regulates their localization to the cell membrane without mediating their phosphorylation (PubMed:29581290). Phosphorylates RELL1, RELL2 and RELT (PubMed:16389068, PubMed:28688764). Phosphorylates PAK1 (PubMed:14707132). Phosphorylates PLSCR1 in the presence of RELT (PubMed:22052202).

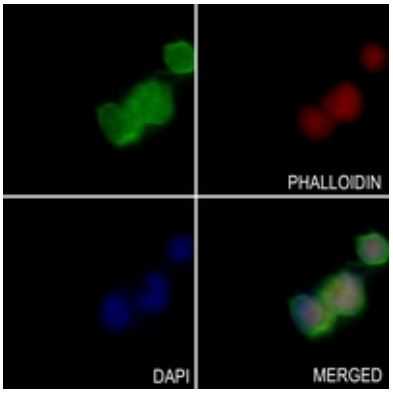
**Cellular Location** Cytoplasm

**Tissue Location** Ubiquitously expressed in all tissue examined.

## Images




Western blot analysis of OXSR1 expression in HEK293T (A), Jurkat (B), mouse lung (C) whole cell lysates. (Predicted band size: 58 kD; Observed band size: 58 kD)




Immunofluorescent analysis of OXSR1 staining in VB2 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.