

**Mouse Oxsr1 Antibody (N-term) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP14158a****Specification**

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**Mouse Oxsr1 Antibody (N-term) Blocking peptide - Product Information**Primary Accession [Q6P9R2](#)**Mouse Oxsr1 Antibody (N-term) Blocking peptide - Additional Information**

Gene ID 108737

**Other Names**Serine/threonine-protein kinase OSR1, Oxidative stress-responsive 1 protein, Oxsr1  
{ECO:0000312|MGI:MGI:1917378}**Target/Specificity**

The synthetic peptide sequence used to generate the antibody AP14158a was selected from the N-term region of Mouse Oxsr1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**Mouse Oxsr1 Antibody (N-term) Blocking peptide - Protein Information**

Name Oxsr1 {ECO:0000312|MGI:MGI:1917378}

**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:<a href="http://www.uniprot.org/citations/17488636" target="\_blank">17488636</a>, PubMed:<a href="http://www.uniprot.org/citations/19633012" target="\_blank">19633012</a>, PubMed:<a href="http://www.uniprot.org/citations/21486947" target="\_blank">21486947</a>). Specifically recognizes and binds proteins with a RFXV motif (By similarity). 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:<a href="http://www.uniprot.org/citations/12386165" target="\_blank">12386165</a>, PubMed:<a href="http://www.uniprot.org/citations/16382158" target="\_blank">16382158</a>, PubMed:<a href="http://www.uniprot.org/citations/17488636" target="\_blank">17488636</a>).

PubMed:<a href="http://www.uniprot.org/citations/19633012" target="\_blank">19633012</a>, PubMed:<a href="http://www.uniprot.org/citations/21486947" target="\_blank">21486947</a>). 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:<a href="http://www.uniprot.org/citations/16382158" target="\_blank">16382158</a>, PubMed:<a href="http://www.uniprot.org/citations/21972418" target="\_blank">21972418</a>). 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:<a href="http://www.uniprot.org/citations/16382158" target="\_blank">16382158</a>). 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:<a href="http://www.uniprot.org/citations/17488636" target="\_blank">17488636</a>, PubMed:<a href="http://www.uniprot.org/citations/19633012" target="\_blank">19633012</a>). Also acts as a regulator of angiogenesis in endothelial cells downstream of WNK1 (PubMed:<a href="http://www.uniprot.org/citations/21972418" target="\_blank">21972418</a>). 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 (By similarity). Phosphorylates REL1, REL2, RELT and PAK1 (By similarity). Phosphorylates PLSCR1 in the presence of RELT (By similarity).

**Cellular Location**

Cytoplasm {ECO:0000250|UniProtKB:O95747}.

**Tissue Location**

Ubiquitously expressed in all tissues examined, except thymus.

**Mouse Oxsr1 Antibody (N-term) Blocking peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

**Mouse Oxsr1 Antibody (N-term) Blocking peptide - Images****Mouse Oxsr1 Antibody (N-term) Blocking peptide - Background**

Oxsr1 regulates downstream kinases in response to environmental stress. May also have a function in regulating the actin cytoskeleton.

**Mouse Oxsr1 Antibody (N-term) Blocking peptide - References**

Hengl, T., et al. Proc. Natl. Acad. Sci. U.S.A. 107(13):6052-6057(2010)Geng, Y., et al. J. Biol. Chem. 284(21):14020-14028(2009)Vallon, V. Kidney Int. 74(11):1373-1375(2008)Chiga, M., et al. Kidney Int. 74(11):1403-1409(2008)Gagnon, K.B., et al. Mol. Cell. Biol. 26(2):689-698(2006)