

Mouse Oxsr1 Antibody (N-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14158a

Specification

Mouse Oxsr1 Antibody (N-term) - Product Information

Application	WB, IHC-P,E
Primary Accession	Q6P9R2
Other Accession	NP_598746.1
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	58214
Antigen Region	94-121

Mouse Oxsr1 Antibody (N-term) - 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

This Mouse Oxsr1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 94-121 amino acids from the N-terminal region of mouse Oxsr1.

Dilution

WB~~1:1000
IHC-P~~1:10~50

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Mouse Oxsr1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Mouse Oxsr1 Antibody (N-term) - 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:[17488636](#), PubMed:[19633012](#), PubMed:[21486947](#)). 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:[12386165](#), PubMed:[16382158](#), PubMed:[17488636](#), PubMed:[19633012](#), PubMed:[21486947](#)). 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:[16382158](#), PubMed:[21972418](#)). 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:[16382158](#)). 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:[17488636](#), PubMed:[19633012](#)). Also acts as a regulator of angiogenesis in endothelial cells downstream of WNK1 (PubMed:[21972418](#)). Acts as an activator of inward rectifier potassium channels KCNJ2/Kir2.1 and KCNJ4/Kir2.3 downstream of WNK1: recognizes and binds the RFXV/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 RELL1, RELL2, RELT and PAK1 (By similarity). Phosphorylates PLSCR1 in the presence of RELT (By similarity).

Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:O95747}.

Tissue Location

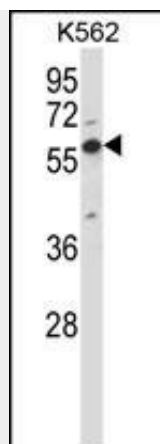
Ubiquitously expressed in all tissues examined, except thymus.

Mouse Oxsr1 Antibody (N-term) - Protocols

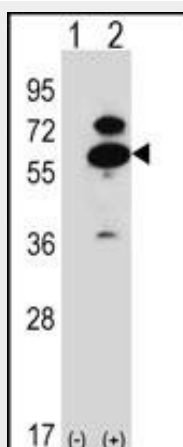
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

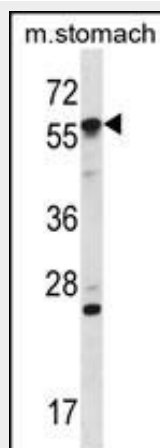
Mouse Oxsr1 Antibody (N-term) - Images



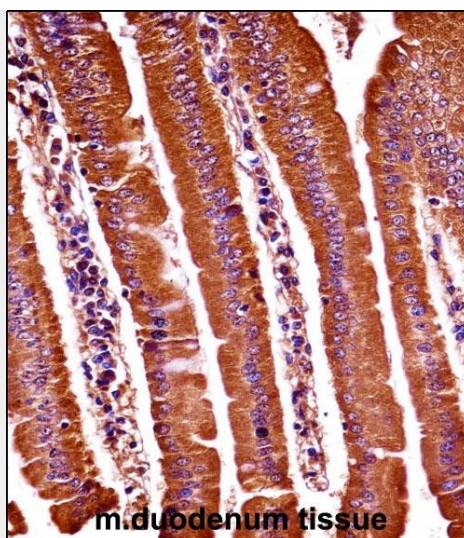
Mouse Oxsr1 Antibody (N-term) (Cat. #AP14158a) western blot analysis in K562 cell line lysates (35ug/lane). This demonstrates the Oxsr1 antibody detected the Oxsr1 protein (arrow).



Western blot analysis of Oxsr1 (arrow) using rabbit polyclonal Mouse Oxsr1 Antibody (N-term) (Cat. #AP14158a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the Oxsr1 gene.



Mouse Oxsr1 Antibody (N-term) (Cat. #AP14158a) western blot analysis in mouse stomach tissue lysates (35ug/lane). This demonstrates the Oxsr1 antibody detected the Oxsr1 protein (arrow).



Mouse Oxsr1 Antibody (N-term) (AP14158a) immunohistochemistry analysis in formalin fixed and paraffin embedded mouse duodenum tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of Mouse Oxsr1 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

Mouse Oxsr1 Antibody (N-term) - 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) - 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)