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Goat Anti-CAPON / NOS1AP Antibody

Peptide-affinity purified goat antibody
Catalog # AF1187a

Specification

Goat Anti-CAPON / NOS1AP Antibody - Product Information

Application	**IHC**
Primary Accession	O75052
Other Accession	NP_001158229, 9722, 70729 (mouse), 192363 (rat)
Reactivity	**Human**
Predicted	**Mouse, Rat, Cow**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**56150**

Goat Anti-CAPON / NOS1AP Antibody - Additional Information

Gene ID 9722

Other Names
Carboxyl-terminal PDZ ligand of neuronal nitric oxide synthase protein, C-terminal PDZ ligand of neuronal nitric oxide synthase protein, Nitric oxide synthase 1 adaptor protein, NOS1AP, CAPON, KIAA0464

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-CAPON / NOS1AP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-CAPON / NOS1AP Antibody - Protein Information

Name NOS1AP (HGNC:16859)

Synonyms CAPON, KIAA0464

Function
Adapter protein involved in neuronal nitric-oxide (NO) synthesis regulation via its association with

nNOS/NOS1. The complex formed with NOS1 and synapsins is necessary for specific NO and synapsin functions at a presynaptic level. Mediates an indirect interaction between NOS1 and RASD1 leading to enhance the ability of NOS1 to activate RASD1. Competes with DLG4 for interaction with NOS1, possibly affecting NOS1 activity by regulating the interaction between NOS1 and DLG4 (By similarity). In kidney podocytes, plays a role in podosomes and filopodia formation through CDC42 activation (PubMed:33523862).

Cellular Location
Cell projection, filopodium {ECO:0000250|UniProtKB:O54960}. Cell projection, podosome {ECO:0000250|UniProtKB:O54960}

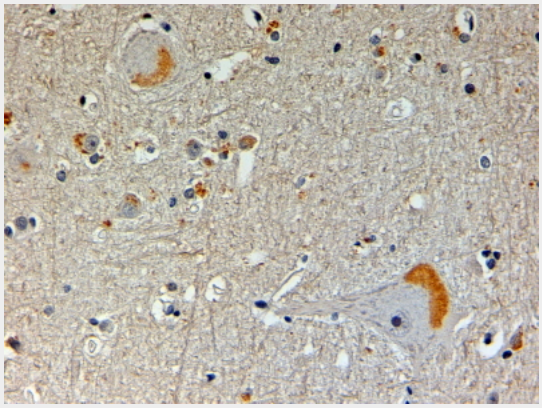
Tissue Location
Expressed in kidney glomeruli podocytes.

Goat Anti-CAPON / NOS1AP Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-CAPON / NOS1AP Antibody - Images



AF1187a (4 µg/ml) staining of paraffin embedded Human Brain. Steamed antigen retrieval with Tris/EDTA buffer pH 9.5, HRP-staining.

Goat Anti-CAPON / NOS1AP Antibody - Background

This gene encodes a cytosolic protein that binds to the signaling molecule, neuronal nitric oxide synthase (nNOS). This protein has a C-terminal PDZ-binding domain that mediates interactions with nNOS and an N-terminal phosphotyrosine binding (PTB) domain that binds to the small monomeric G protein, Dexras1. Studies of the related mouse and rat proteins have shown that this protein functions as an adapter protein linking nNOS to specific targets, such as Dexras1 and the synapsins. Alternative splicing results in multiple transcript variants encoding different isoforms.

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A common variant of NOS1AP is associated with QT interval duration in a Chinese population with Type 2 diabetes. Lu J, et al. Diabet Med, 2010 Sep. PMID 20722683.
Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.
Mutation screening of NOS1AP gene in a large sample of psychiatric patients and controls. Delorme R, et al. BMC Med Genet, 2010 Jul 5. PMID 20602773.
Childhood trauma and genetic factors in familial schizophrenia associated with the NOS1AP gene. Husted JA, et al. Schizophr Res, 2010 Aug. PMID 20541371.
Polymorphisms in the NOS1AP gene modulate QT interval duration and risk of arrhythmias in the long QT syndrome. Tom□s M, et al. J Am Coll Cardiol, 2010 Jun 15. PMID 20538168.