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CAPON Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54699

Specification

CAPON Polyclonal Antibody - Product Information

Application	**WB, IHC-P, IHC-F, IF, ICC, E**
Primary Accession	O75052
Reactivity	**Rat, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**56 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human CAPON**
Epitope Specificity	**128-170/506**
Isotype	**IgG**

Purity
affinity purified by Protein A

Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SIMILARITY	**Contains 1 PID domain.**
SUBUNIT	**Interacts with the PDZ domain of NOS1 or the second PDZ domain of DLG4 through its C-terminus. Interacts with RASD1 and SYN1, SYN2 and SYN3 via its PID domain. Forms a ternary complex with NOS1 and RASD1. Forms a ternary complex with NOS1 and SYN1**
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
CAPON (carboxy-terminal PDZ ligand of nNOS) selectively binds within the 100 amino acid PDZ domain of the neuronal nitric oxide synthase (nNOS), but not to endothelial NOS or inducible NOS, and sequesters nNOS in the cytosol. Biosynthesis of the neurotransmitter nitric oxide (NO) requires the association of nNOS with various synaptic proteins, including syntrophin, postsynaptic density (PSD)95 and PSD93 through a scaffolding PDZ domain. These proteins facilitate the transport of nNOS to the plasma membrane, where it is catalytically activated by NMDA-receptor mediated calcium channels. The association of nNOS with PSD95 or PSD93 is regulated by CAPON. The carboxy terminus of CAPON binds to the PDZ domain, competes with PSD95 and PSD93 for binding to nNOS and in turn prevents the translocation and catalytic activation of nNOS.

CAPON Polyclonal 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

Dilution
WB~~1:1000<br \>IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>ICC~~N/A<br \>E~~N/A

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.

CAPON Polyclonal 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.

CAPON Polyclonal 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

CAPON Polyclonal Antibody - Images