nNOS Rabbit pAb

CatalogNo: YT3168 Orthogonal Validated

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat

Applications
- WB,IHC,IF,ELISA

MW
- 130-160kD (Observed)

Isotype
- IgG

Recommended Dilution Ratios

WB 1:500-1:2000
IHC 1:100-1:300
IF 1:200-1:1000
ELISA 1:5000
Not yet tested in other applications.

Storage

Storage*	-15°C to -25°C/1 year(Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	The antiserum was produced against synthesized peptide derived from human nNOS. AA range:818-867
Specificity	NOS1 Polyclonal Antibody detects endogenous levels of NOS1 protein.

Target Information

Gene name NOS1

Protein Name Nitric oxide synthase brain

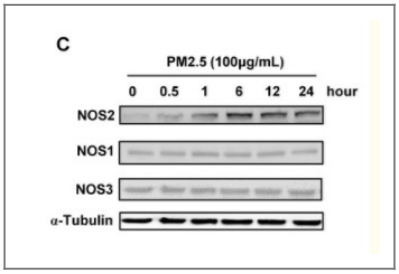
Organism	Gene ID	UniProt ID
Human	4842;	P29475;
Mouse	18125;	Q9Z0J4;
Rat	24598;	P29476;

Cellular Localization Cell membrane, sarcolemma; Peripheral membrane protein. Cell projection, dendritic spine . In skeletal muscle, it is localized beneath the sarcolemma of fast-twitch muscle fiber by associating with the dystrophin glycoprotein complex. In neurons, enriched in dendritic spines (By similarity). .

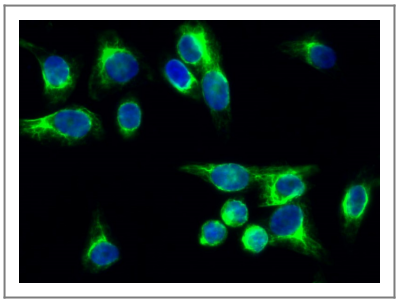
Tissue specificity Isoform 1 is ubiquitously expressed: detected in skeletal muscle and brain, also in testis, lung and kidney, and at low levels in heart, adrenal gland and retina. Not detected in the platelets. Isoform 3 is expressed only in testis. Isoform 4 is detected in testis, skeletal muscle, lung, and kidney, at low levels in the brain, but not in the heart and adrenal gland.

Function Alternative products:Isoform 3 is produced by different alternative splicing events implicating either the untranslated exons TEX1 (TN-NOS) or TEX1B (TN-NOSB) leading to a N-terminus truncated protein which possesses enzymatic activity comparable to that of isoform 1. The C-terminal truncated isoform 4 is produced by insertion of the TEX2 exon between exons 3 and 4 of isoform 1, leading to a frameshift and a premature stop codon,Catalytic activity:L-arginine + n NADPH + n H(+) + m O(2) = citrulline + nitric oxide + n NADP(+).,cofactor:Binds 1 FAD.,cofactor:Binds 1 FMN.,cofactor:Heme group.,cofactor:Tetrahydrobiopterin (BH4). May stabilize the dimeric form of the enzyme.,Disease:Genetic variations in NOS1 gene are associated with susceptibility to infantile hypertrophic pyloric stenosis type 1 (IHPS1) [MIM:179010]. IHPS has an incidence of 1-5 per 1'000 live births in whites and a marked preponderance of males to females (4:1). IHPS is the most frequent disorder requiring surgery in the first year of life. The disorder is characterized by hypertrophy and hyperplasia of the circular muscle layer of the pylorus, leading to persistent vomiting 2-12 weeks after birth. Defective pyloric relaxation and increased pyloric smooth muscle mass have been suggested to be responsible for gastric-outlet obstruction.,Domain:The PDZ domain in the N-terminal part of the neuronal isoform participates in protein-protein interaction, and is responsible for targeting nNos to synaptic membranes in muscles.,enzyme regulation:Stimulated by calcium/calmodulin. Inhibited by n-Nos-inhibiting protein (PIN) which may prevent the dimerization of the protein. Inhibited by NOSIP.,Function:Produces nitric oxide (NO) which is a messenger molecule with diverse functions throughout the body. In the brain and peripheral nervous system, NO displays many properties of a neurotransmitter.,online information:Nitric oxide synthase entry,similarity:Belongs to the NOS family.,similarity:Contains 1 FAD-binding FR-type domain.,similarity:Contains 1 flavodoxin-like domain.,similarity:Contains 1 PDZ (DHR) domain.,subcellular location:In skeletal muscle, it is localized beneath the sarcolemma of fast-twitch muscle fiber by associating with the dystrophin glycoprotein complex. In neurons, enriched in dendritic spines.,subunit:Homodimer. Interacts with DLG4; the interaction possibly being prevented by the association between NOS1 and CAPON. Forms a ternary complex with CAPON and RASD1. Forms a ternary complex with CAPON and SYN1. Interacts with ZDHHC23. Interacts with NOSIP; which may impair its synaptic location (By similarity). Interacts with HTR4.,tissue specificity:Isoform 1 is ubiquitously expressed: detected in skeletal muscle and brain, also in testis, lung and kidney, and at low levels in heart, adrenal gland and retina. Not detected in the platelets. Isoform 3 is expressed only in testis. Isoform 4 is detected in testis, skeletal muscle, lung, and kidney, at low levels in the brain, but not in the heart and adrenal gland.,

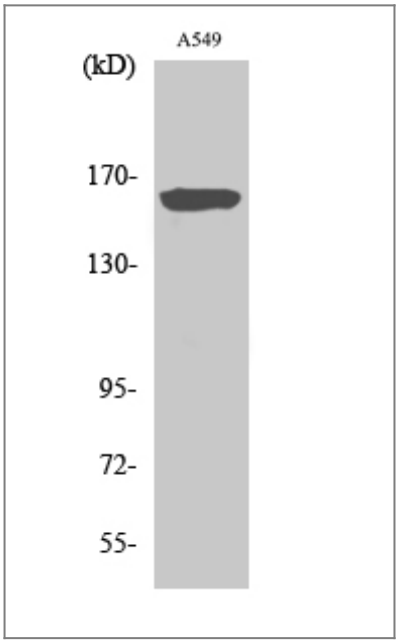
Validation Data



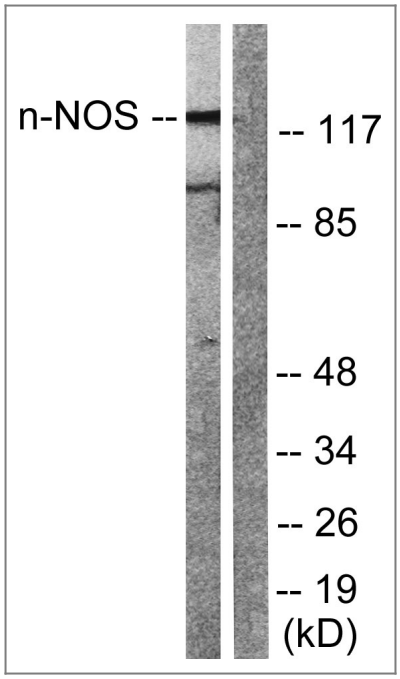
Zhu, Xiao-Ming, et al. "PM2. 5 induces autophagy-mediated cell death via NOS2 signaling in human bronchial epithelium cells." International journal of biological sciences 14.5 (2018): 557.



Immunofluorescence analysis of Hela cell. 1,NOS1 Polyclonal Antibody(green) was diluted at 1:200(4° overnight). 2, Goat Anti Rabbit Alexa Fluor 488 Catalog:RS3211 was diluted at 1:1000(room temperature, 50min). 3 DAPI(blue) 10min.



Western Blot analysis of various cells using NOS1 Polyclonal Antibody diluted at 1:500



Western blot analysis of lysates from Raw264.7 cells, treated with INF 2500u/ml 10', using nNOS Antibody. The lane on the right is blocked with the synthesized peptide.

Contact information

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Please scan the QR code to access additional product information:
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