Human Nitric Oxide Synthase-3  
Clone RN5  
Cat. no. MONX10927

Specificity
Human nitric oxide synthases are a family of enzymes responsible for the synthesis of nitric oxide from L-arginine and molecular oxygen. There are at least three nitric oxide synthases; NOS-1, also known as neuronal NOS or nNOS, NOS-2, which is referred to as inducible NOS or iNOS and NOS-3, also known as endothelial NOS or eNOS. As suggested by their nomenclature, these enzymes have different cellular distribution and are subjected to different regulatory mechanisms. NOS-3, like NOS-1, is a constitutive form of NOS and produces picomolar quantities of nitric oxide (NO) which plays a role in signal transmission and results in physiological effects. In the gastrointestinal tract, NO plays a protective role where it has direct microbiocidal properties and acts as a first line of mucosal defence against luminal aggressors in the stomach. The function of NO in tumour development, promotion and progression is not clear. The effects may be both beneficial and detrimental to those patients with gastric cancer. There may be important clinical implications if we can establish the point at which NO ceases to be beneficial for the body by its microbiocidal and tumouricidal activity and becomes harmful by supporting tumour progression through the creation of neovasculature. It is noteworthy that different antibodies to the same isoforms rarely detect the same cell populations even within a single species. Therefore, careful immunohistochemical and biochemical analysis is important. MONX10927 detects nitric oxide synthase-3 in endothelial cells.

Immunoglobulin type
Mouse IgG1

Use
The antibody can be used for immunohistochemistry on frozen (acetone fixation recommended) and paraffin sections.

Instructions for use
Immunohistochemistry:
Typical working dilution 1:40 - 1:80.
High temperature antigen unmasking technique.
60 minutes primary antibody incubation at 25°C.
Standard ABC technique.

Antigen used for immunizations: Recombinant prokaryotic protein corresponding to a C-terminal region (1030-1202aa) of the nitric oxide synthase-3 molecule.
Staining pattern: Cytoplasmic and membrane

Positive control
Placenta

Presentation
Lyophilised tissue culture supernatant containing 15mM sodium azide.
Reconstitute with 1ml or 0.1ml of sterile distilled water as indicated on vial label.
Literature

Storage and Handling
Store unopened lyophilised antibody at 4°C. Under these conditions, there is no significant loss in product performance up to the expiry date indicated on the vial label. The reconstituted antibody is stable for at least two months when stored at 4°C. For long term storage, it is recommended that aliquots of the antibody are frozen at -20°C (frost-free freezers are not recommended). Repeated freezing and thawing must be avoided. Prepare working dilutions on the day of use.

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