Human Endothelial Nitric Oxide Synthase (eNOS) cDNA Probe

Cat# eNOS51-D **Size**: 2.0 ug DNA **Store** at -20°C

Form: Lyophilized Lyophilized

The cDNA probe is provided as a double stranded cDNA fragment as lyophilized powder. It can be re-suspended in a desired buffer (50-100ul buffer: 10mM Tris-HCl, pH 7.5, 0.1 mM EDTA). Store is suitable size aliquots at –20oC for 6-12 months. The probe has 5' overhangs and >98 % purity. The length of the probe is derived from a segment of human endothelial constitutive nitric oxide synthase (eNOS) gene, which has a length of approximately 1.23 kbp. The probe may be labeled by radioactive or non-radioactive compounds using either random primer labeling or nick translation.

Northern blot analysis reveals an eNOS mRNA with an approximate size of 4.4 kbp.

Form and usage:

For best results, reconstitute the probe in just prior to use in either water or TE buffer. If the reconstituted probe cannot be used within two weeks, it should be aliquoted and into smaller vials and stored at –20oC. It is stable for 1 yr at –20oC. For Northern and Southern blot techniques, we recommend following procedures described in molecular biology manuals such as Current Protocols in Molecular Biology or Molecular Cloning: A Laboratory manual.

Northern blot analyses reveal that eNOS mRNA from bovine and rat endothelial cells has a size of approx. 4.4 kbp (1). In addition, a size of approx. 4.7 kbp has been reported for eNOS mRNA from human bronchiolar epithelial cells, ovine fetal pulmonary artery endothelial cells, and rat sheep, and pig lung. Bovine eNOS is 94% homologous to human eNOS at the amino acid levels. It is only 50-60% related with iNOS and bNOS from various species.

References:

1. Sessa et al. Molecular cloning and expression of a cDNA encoding endothelial cell nitric oxide synthase. *J. Biol. Chem.* **267**, 15274-15276 (1992)
2. Feinburg and Vogelstein. A technique for radiolabeling DNA restriction endonuclease fragments to high specific activity. *Anal. Biochem.***132**, 6-10 (1983)
3. Koch et al. AN improved method for labeling of DNA probes by nick translation. *Nucleic Acid Res.* **14**, 7132 (1986).
4. Sebi et al. Non Radioactive labeling and detection of nucleic acids III. Application of the digioxigenin system. *Biol. Chem. Hoppe-Seyler* **371**, 939-951 (1990).
5. Kessler et al. Non radioactive labeling and detection of nucleic acids. A novel DNA labeling and detection system based on digioxigenin: Anti-digioxigenin ELISA principle (Digioxigenin system). *Biol. Chem. Hoppe-Seyler* **371**, 916-927 (1990).
6. Shaul et al. Endothelial nitric oxide synthase is expressed in cultured human bronchiolar epithelium. *J. Clin. Invest.* **94,** 2231-2236 (1994).

These materials should be used for In Vitro Research Use and Manufacturing Only.

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Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com
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