

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human NQO-2 in direct ELISAs and Western blots. In direct ELISAs, less than 3% cross-reactivity with recombinant human NQO-1 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human NQO-2 Ala2-Gln231 (Leu47Phe) Accession # P16083
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

NQO-2 (NADPH Quinone acceptor Oxidoreductase 2; also QR2, melatonin receptor 3/MT3 and NRH dehydrogenase) is a 25-26 kDa cytoplasmic flavoprotein member of the NAD(P)H dehydrogenase family of enzymes. It shows restricted expression, being found in retinal pigment epithelium, prostatic fibroblasts, select CNS neurons and RBCs. Like NQO-1, NQO-2 would appear to reduce catechol quinones, but without the use of NADH. In contrast to NQO-1, NQO-2 would appear to activate some quinones, generating cytotoxic products. NQO-2 also reportedly binds and stabilizes key cell protection molecules such as p53, thus acting as a gatekeeper for proteasome-mediated protein turnover. Finally, NQO-2 reportedly binds to melatonin, an act that may promote the subsequent binding of the androgen receptor and an inhibition of cell proliferation. Human NQO-2 is 231 amino acids (aa) in length. It contains a flavodoxin-like domain (aa 4-212) and three utilized Ser phosphorylation sites. NQO-2 functions as a noncovalent homodimer. There are two potential isoform variants. One shows an alternative start site at Met117, while another shows a deletion of aa 102-139. Full length human NQO-2 shares 81% aa sequence identity with mouse NQO-2, and less than 50% aa sequence identity with human NQO-1.

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