

DESCRIPTION

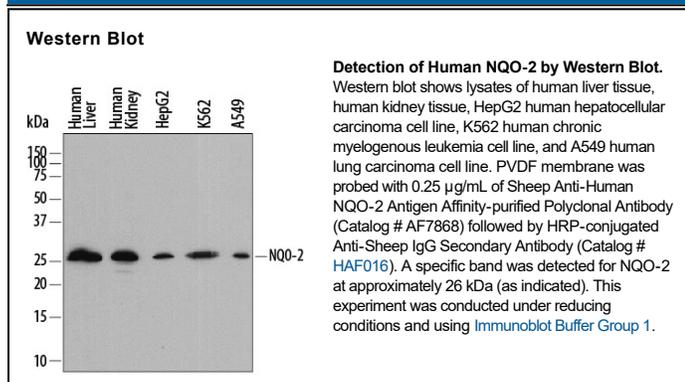
Species Reactivity	Human
Specificity	Detects human NQO-2 in direct ELISAs and Western blots. In direct ELISAs, less than 3% cross-reactivity with recombinant human NQO-1 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human NQO-2 Ala2-Gln231 (Leu47Phe) Accession # P16083
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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.

	Recommended Concentration	Sample
Western Blot	0.25 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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.