

DESCRIPTION

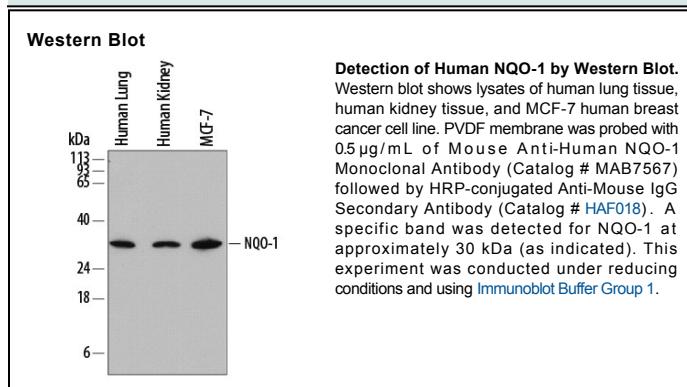
Species Reactivity	Human
Specificity	Detects human NQO-1 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human NQO-2 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 844142
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human NQO-1 Met1-Lys274 Accession # P15559
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 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	0.5 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 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-1 (NADPH Quinone acceptor Oxidoreductase 1; also DTD and Menadione reductase) is a 30-33 kDa cytoplasmic member of the NAD(P)H dehydrogenase family of enzymes. It is widely expressed, being found in adipocytes, endothelial cells and hepatocytes. NQO-1 serves as a cytoprotective molecule, reducing quinones (atmospheric benzene and estrogen compounds) and nitroaromatics without consuming sulfhydryl compounds. It also acts as a backup superoxide scavenger to SOD. NQO-1 reportedly binds and stabilizes key cell protection molecules such as p53, thus acting as a gatekeeper for proteasome-mediated protein turnover. Human NQO-1 is 274 amino acids (aa) in length. It contains an FMN reductase domain (aa 5-212) and two utilized Lys acetylation sites. NQO-1 functions as a noncovalent homodimer. There are three potential at Met22, while two others show a deletion of aa 141-174 and 102-139, respectively. Full length human NQO-1 shares 86% aa sequence identity with mouse NQO-1.