

Human NQO1 / DT-diaphorase Protein (His Tag)

Catalog Number: 12046-H07E



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

DHQU; DIA4; DTD; NMOR1; NMORI; QR1

Protein Construction:

A DNA sequence encoding the mature form of human NQO1 (P15559-1) (Met1-Lys274) was expressed with a polyhistide tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: His

Molecular Mass:

The recombinant human NQO1 consists of 290 amino acids and predicts a molecular mass of 33 KDa. It migrates as an approximately 33 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

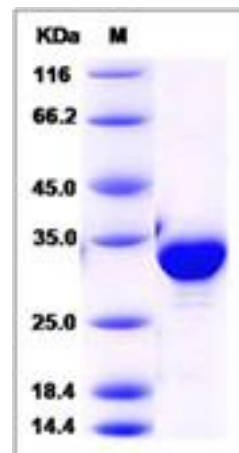
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

NQO1 gene is a member of the NAD(P)H dehydrogenase (quinone) family and encodes a cytoplasmic 2-electron reductase. NQO1 forms homodimers and reduces quinones to hydroquinones. NQO1's enzymatic activity prevents the one electron reduction of quinones that results in the production of radical species. Mutations in NQO1 gene have been associated with tardive dyskinesia (TD), an increased risk of hematotoxicity after exposure to benzene, and susceptibility to various forms of cancer. Altered expression of NQO1 has been seen in many tumors and is also associated with Alzheimer's disease (AD). Alternate transcriptional splice variants, encoding different isoforms, have been characterized. Recent pharmacological research suggests feasibility of genotype-directed redox chemotherapeutic intervention targeting NQO1 breast cancer, a common missense genotype encoding a functionally impaired NQO1 protein.

References

1. Ross David. et al., 2002, J Biol Chem. 277 (16): 14060-7. 2. Cabello CM. et al., 2010, Free Radic Res. 45 (3): 276-92. 3. Adesnik M. et al., 1988, J Biol Chem. 263 (27): 13572-8.

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