

NQO1 Protein, Human, Recombinant (His)

General Information

Synonyms:	NAD(P)H dehydrogenase, quinone 1;NMORI;DIA4;QR1;NMOR1;DTD;DHQU
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. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	P15559-1
Molecular Weight:	33 kDa (predicted); 33 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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 the 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 the feasibility of genotype-directed redox chemotherapeutic intervention targeting NQO1 breast cancer, a common missense genotype encoding a functionally impaired NQO1 protein.

Reference

Ross David. et al., 2002, J Biol Chem. 277 (16): 14060-7.

Cabello CM. et al., 2010, Free Radic Res. 45 (3): 276-92.

Adesnik M. et al., 1988, J Biol Chem. 263 (27): 13572-8.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481