Data Sheet (Cat.No.TMPY-03443)

TargetMol

NDRG1 Protein, Human, Recombinant (His)

General Information

Synonyms:	TARG1;PROXY1;RIT42;NDR1;DRG1;RTP;TDD5;CMT4D;CAP43;NMSL;N-myc downstream regulated 1;HMSNL;GC4;DRG-1
Protein Construction:	A DNA sequence encoding the human NDRG1 (Q92597) (Met1-Cys394) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q92597
Molecular Weight:	43.8 kDa (predicted); 43 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:	> 85 % 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

NDRG1 gene is a member of the N-Myc downregulated gene family which belongs to the alpha/beta hydrolase superfamily. NDRG1 is a cytoplasmic protein involved in stress responses, hormone responses, cell growth, and differentiation. NDRG1 is necessary for p53-mediated caspase activation and apoptosis. Mutations in the NDRG1 gene are a cause of Charcot-Marie-Tooth disease type 4D, and expression of this gene may be a prognostic

indicator for several types of cancer. NDRG1 is a stress-responsive protein involved in hormone responses, cell growth, and differentiation. It acts as a tumor suppressor in many cell types.

Reference

Kachhap SK, et al. (2007) The N-Myc down regulated Gene1 (NDRG1) Is a Rab4a effector involved in vesicular recycling of E-cadherin. PLoS ONE. 2(9):e844.

Zhang J, et al. (2008) Human differentiation-related gene NDRG1 is a Myc downstream-regulated gene that is repressed by Myc on the core promoter region. Gene. 417(1-2):5-12.

Kokame K, et al. (1997) Homocysteine-respondent genes in vascular endothelial cells identified by differential display analysis. GRP78/BiP and novel genes. J Biol Chem. 271(47): 29659-65.

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