

ART1 Protein, Human, Recombinant (His)

General Information

Synonyms:	ADP-ribosyltransferase 1;CD296;ARTC1;ART2;RT6
Protein Construction:	A DNA sequence encoding the human ART1 (NP_004305.2) (Met1-Asn294) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Gln 23
Species:	Human
Expression Host:	HEK293 Cells
Accession:	NP_004305.2
Molecular Weight:	31.55 kDa (predicted); 38.70 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:	> 95 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
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

Mono-ADP-ribosyltransferase (ART) 1 belongs to a family of mammalian ectoenzymes that catalyze the transfer of ADP-ribose from NAD⁺ to a target protein. ART1 is predominantly expressed in skeletal and cardiac muscle. It ADP-ribosylates alpha7-integrin which together with beta1-integrin forms a dimer and binds to laminin, a protein of the extracellular matrix involved in cell adhesion. This posttranslational modification leads to an increased laminin binding affinity. The differentiation-dependent upregulation of ART1 mRNA is induced by the binding of myogenin

to an E box and of MEF-2 to an A/T-rich element in the proximal promoter region of the ART1 gene. Colorectal carcinoma is one of the most common cancers world-wide, with high morbidity and mortality rates. Arginine ADP-ribosyltransferase 1(ART1) is an important ecto-ADP-ribose transferase and has been proven to be intimately involved in a number of biological processes. The molecular mechanism for the function of ART1 in colorectal carcinoma and defines a potential therapeutic target for the enhanced treatment of this prominent world-wide disease

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