

## ART4/CD297 Protein, Mouse, Recombinant (His)

### General Information

Synonyms:	ADP-ribosyltransferase 4 (Dombrock blood group);ARTC4;4432404K01Rik;DO;DOK1
Protein Construction:	A DNA sequence encoding the mature form of mouse ART4 (EDL10575.1) (Met1-Lys 263) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Gly 24
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	EDL10575.1
Molecular Weight:	28.2 kDa (predicted); 40-45 kDa (reducing condition, due to glycosylation)

### 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:	> 92 % 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

ADP-ribosyltransferase 4 (Dombrock blood group), also known as Mono-ADP-ribosyltransferase 4(ART4), Dombrock blood group carrier molecule and CD297, is a protein that contains a mono-ADP-ribosylation (ART) motif. It is a member of the ADP-ribosyltransferase gene family but enzymatic activity has not been demonstrated experimentally. ADP-ribosyltransferase catalyzes the ADP-ribosylation of arginine residues in proteins. Mono-ADP-ribosylation is a posttranslational modification of proteins that is interfered with by a variety of bacterial

toxins including cholera, pertussis, and heat-labile enterotoxins of E. coli. ART4 could be detected on HEL cells and erythrocytes by FACS analysis while it was absent from activated monocytes, despite the presence of ART4 mRNA in these cells. ART is also known as the carrier of the Dombrock blood group alloantigens (Do) which is glycosylphosphatidylinositol-anchored to the erythrocyte membrane.

### Reference

- Parusel I, et al. (2005) A panel of monoclonal antibodies recognizing GPI-anchored ADP-ribosyltransferase ART4, the carrier of the Dombrock blood group antigens. *Cell Immunol.* 236(1-2): 59-65.
- Friedrich M, et al. (2005) Analysis of the 3' UTR of the ART3 and ART4 gene by 3' inverse RACE-PCR. *DNA Seq.* 16(1): 53-7.
- Okazaki IJ, et al. (1998) Glycosylphosphatidylinositol-anchored and secretory isoforms of mono-ADP-ribosyltransferases. *J Biol Chem.* 273(37): 23617-20.

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