Data Sheet (Cat.No.TMPY-00583)

TargetMol

ADPRH Protein, Human, Recombinant (His)

General Information

Synonyms:	ADP-ribosylarginine hydrolase;ARH1
Protein Construction:	A DNA sequence encoding the human ADPRH (NP_001116.1) (Met1-Leu351) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	P54922
Molecular Weight:	41.7 kDa (predicted); 41 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

Cholera toxin (CT) produced by Vibrio cholerae causes the devastating diarrhea of cholera by catalyzing the ADP-ribosylation of the alpha subunit of the intestinal Gs protein (Gsalpha), leading to characteristic water and electrolyte losses. Mammalian cells contain ADP-ribosyltransferases similar to CT and an ADP-ribosyl(arginine) protein hydrolase (ADPRH), which cleaves the ADP-ribose-(arginine)protein bond, regenerating native protein and completing an ADP-ribosylation cycle. CT-catalyzed ADP-ribosylation of cell proteins can be counteracted by

ADPRH, which could function as a modifier gene in disease. Further, our study demonstrates that enzymatic cross talk exists between bacterial toxin ADP-ribosyltransferases and host ADP-ribosylation cycles. In disease, toxin-catalyzed ADP-ribosylation overwhelms this potential host defense system, resulting in persistence of ADP-ribosylation and intoxication of the cell. Mono-ADP-ribosylation is a reversible modification of proteins with NAD: arginine ADP-ribosyltransferases and ADP-ribosylarginine hydrolases (ADPRH) catalyzing the opposing arms of an ADP-ribosylation cycle. The ADPRH cDNA had been cloned from human, rat, and mouse tissues and high levels of mRNA were found in brain, spleen, and testis. Human ADP-ribosylhydrolase 1 (hARH1, ADPRH) cleaves the glycosidic bond of ADP-ribose attached to an Arg residue of a protein.

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