Recombinant MACD2 protein (His tag)

Catalog Number	543997
Synonyms	MACRO domain-containing protein 2; O-acetyl-ADP-ribose deacetylase MACROD2; [Protein ADP-ribosylaspartate] hydrolase MACROD2; [Protein ADP-ribosylglutamate] hydrolase MACROD2
Species	Human
Expression System	E. coli
Accession	A1Z1Q3
Molecular Weight	Predictes a molecular mass of 28.96 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 29 kDa band.

Product Information

Sequence Region	1-242
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-242 aa (A1Z1Q3) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant human ADP-ribose glycohydrolase MACROD2 (amino acids 1-242) is a high-purity protein fragment encompassing the full Macro domain. This product is engineered for studying the enzyme's specific roles in reversing mono-ADP-ribosylation and deacetylating O-acetyl-ADP ribose, making it an essential tool for research on post-translational modifications and cellular signaling pathways. MACROD2 is a nuclear enzyme that catalyzes the removal of ADP-ribose from aspartate and glutamate residues on proteins modified with a single ADP-ribose moiety, while being inactive toward poly-ADP-ribosylated proteins. It also deacetylates O-acetyl-ADP ribose, a key signaling molecule derived from histone and protein deacetylation processes. The protein is localized to the nucleus and is recruited to DNA lesions, likely through interactions with mono-ADP-ribosylated proteins, implicating it in DNA damage response and epigenetic regulation. This recombinant fragment retains the functional Macro domain, enabling focused investigations into its catalytic and regulatory mechanisms.