Recombinant MACD1 protein (His tag)

Catalog Number	538814
Synonyms	MACRO domain-containing protein 1; O-acetyl-ADP-ribose deacetylase MACROD1; Protein LRP16; [Protein ADP-ribosylaspartate] hydrolase MACROD1; [Protein ADP-ribosylglutamate] hydrolase MACROD1
Species	Human
Expression System	E. coli
Accession	Q9BQ69
Molecular Weight	Predictes a molecular mass of 28.39 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 29 kDa band.

Product Information

Sequence Region	87-325
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 87-325 aa (Q9BQ69) 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 MACROD1 (87-325) Fragment: A high-purity protein fragment encompassing the functional Macro domain of ADP-ribose glycohydrolase MACROD1. This product is an essential tool for investigating mono-ADP-ribosylhydrolase activity, estrogen and androgen receptor signaling, and O-acetyl-ADP-ribose deacetylation in hormone-dependent cancer research and DNA damage response studies. MACROD1, also known as LRP16, is a multifunctional enzyme encoded by the MACROD1 gene in humans. It primarily functions to remove ADP-ribose modifications from aspartate and glutamate residues on target proteins, specifically acting on mono-ADP-ribosylated substrates while being inactive toward poly-ADP-ribosylated proteins. Additionally, MACROD1 deacetylates the signaling molecule O-acetyl-ADP-ribose, which is generated during histone deacetylation processes. The protein plays a significant role in hormone signaling pathways by binding to and amplifying the transactivation functions of both estrogen receptor (ESR1) and androgen receptor (AR), contributing to mechanisms involved in hormone-dependent cancers. It is predominantly localized in the nucleus and is recruited to DNA lesion sites, likely through interactions with mono-ADP-ribosylated proteins, implicating it in DNA damage response and repair processes.