Recombinant MTND protein (His tag)

Catalog Number	545835
Synonyms	Acireductone dioxygenase (Fe(2+)-requiring); ARD'; Fe-ARD; Acireductone dioxygenase (Ni(2+)-requiring); ARD; Ni-ARD; Membrane-type 1 matrix metalloproteinase cytoplasmic tail-binding protein 1; MTCBP-1; Submergence-induced protein-like factor; Sip-L
Species	Human
Expression System	E. coli
Accession	Q9BV57
Molecular Weight	Predictes a molecular mass of 23.15 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	1-179
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 1-179 aa (Q9BV57) 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 Acireductone Dioxygenase (ADI1) Fragment (residues 1-179) is a high-purity, soluble protein designed for structural and biochemical studies. This fragment encompasses a stable functional domain, enabling research into its dual enzymatic activities and roles in methionine recycling, cell migration regulation, and viral replication. The full-length Acireductone Dioxygenase (ADI1) is a versatile enzyme that catalyzes metal-dependent reactions: the Fe(2+)-bound form (Fe-ARD; EC 1.13.11.54) produces formate and 2-keto-4-methylthiobutyrate, a precursor in methionine recycling, while the Ni(2+)-bound form (Ni-ARD; EC 1.13.11.53) yields methylthiopropionate, carbon monoxide, and formate. Beyond its enzymatic functions, ADI1 downregulates MMP14-mediated cell migration and is essential for hepatitis C virus replication. It localizes to the cytoplasm, nucleus, and plasma membrane (as a peripheral membrane protein on the cytoplasmic side), where it associates with MMP14 to modulate cellular processes. This recombinant fragment provides a targeted tool for investigating these multifaceted roles.