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AR51806PU-N Human Inositol monophosphatase 3 / IMPA3 (34-359, His-tag) - Purified

Alternate names: IMPAD1, IMPase 3, Inositol monophosphatase domain-containing protein 1, Inositol-1(or 4)-monophosphatase 3, Myo-inositol monophosphatase A3

Quantity: 50 µg

Concentration: 0.25 mg/ml (determined by Bradford assay)

Background: IMPAD1, also known as Inositol monophosphatase 3, is a member of the inositol monophosphatase family. IMPAD1 is localized to the Golgi apparatus and catalyzes the hydrolysis of phosphoadenosine phosphate (PAP) to adenosine monophosphate (AMP). Mutations in this gene are a cause of GRAPP type chondrodysplasia with joint dislocations, and a pseudogene of this gene is located on the long arm of chromosome 1.

Uniprot ID: Q9NX62

NCBI: NP_060283

GeneID: 54928

Species: Human

Source: E. coli

Format:
State: Liquid purified protein
Purity: >90% by SDS - PAGE
Buffer System: Phosphate Buffered Saline (pH7.4).

Description: Recombinant human IMPAD1 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by conventional chromatography, after refolding of the isolated inclusion bodies in a renaturation buffer.
AA Sequence:
MGSSHHHHHH SSGLVPRGSH MGSGRFSLFG LGGEPGGGAA GPAAAADGGT VDLREMLAVS
VLAAVRGGDE VRRVRESNVL HEKSKGKTRE GAEDKMTSGD VLSNRKMFYL LKTAFPSVQI
NTEEHVDAAD QEVILWDHKI PEDILKEVTT PKEVPAESVT VWIDPLDATQ EYTEDLRKYV
TTMVCVAVNG KPMLGVIHKP FSEYTAWAMV DGGSNVKARS SYNEKTPRIV VSRSHSGMVK
QVALQTFGNQ TTIIPAGGAG YKVLALLDVP DKSQEKADLY IHVTYIKKWD ICAGNAILKA
LGGHMTTLSG EEISYTGSDG IEGGLLASIR MNHQALVRKL PDLEKTGHK
Specific Activity: Specific acitivty > 3300 pmole/min/ug, its ability to dephosphorylate adenosine 3'5'-diphosphate sodium slat at pH 7.5, 25C.
Molecular weight: 37.6 kDa (349aa) confirmed by MALDI-TOF

Storage: Store undiluted at 2-8°C for one week or (in aliquots) at -20°C to -80°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

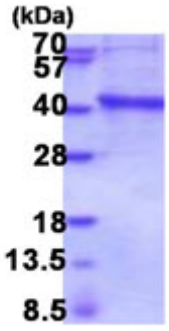
General Readings: Vissers L E., et al. (2011) Am J Hum Genet. 88:608-615. Kalujnaia S., et al. (2010) FASEB J. 24:3981-3991.

For research and in vitro use only. Not for diagnostic or therapeutic work.
Material Safety Datasheets are available at www.acris-antibodies.com or on request.

Protocols:

1. Prepare 1mM PAP in 20mM Tris-HCl (PH 7.5), 15mM MgCl2. 2. Dilute IMPAD1 various concentration (20ug/ml, 10ug/ml, 5ug/ml) in 20mM Tris-HCl (PH 7.5), 15mM MgCl2, containing blank of 20mM Tris-HCl, 15mM MgCl2 3. Make the Phosphate standard range of 0.31 nmol to 20 nmol per well. 4. Load 25 ul of 1mM PAP add 25 ul of diluted IMPAD1 to well and load 50 ul of phosphate standard. 5. Incubate for15 minute at 25C. 6. Add 150 ul of Malachite green solution mix and incubate for 15 minute at 25C. 7. Read at 650nm. - Malachite green solution: Ammonium molybdate 675 mg, Malachite green carbinol hydrochloride 3.3 mg in 50 ml of 1M H2SO4.

Pictures:



15% SDS-PAGE (3ug)

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