SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

PRODUCT INFORMATION

Metalloendopeptidase OMA1 (human, recombinant)

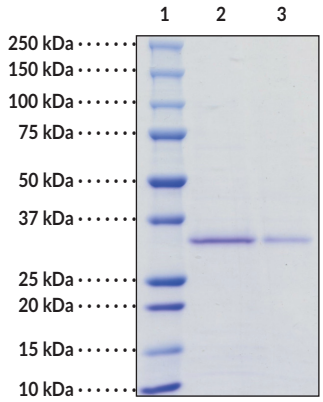
Item No. 28258

Overview and Properties

Synonyms:	Metalloprotease-related Protein 1, MPRP-1, OMA1, Overlapping with the m-AAA Protease 1 Homolog
Source:	Recombinant N-terminal His-tagged OMA1 expressed in *E. coli*
Amino Acids:	217-524
Uniprot No.:	Q96E52
Molecular Weight:	37.1 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	***batch specific*** (≥90% estimated by SDS-PAGE)
Supplied in:	50 mM Tris, pH 8.0, with 150 mM sodium chloride, 10% glycerol, 0.5 M L-arginine, and 2 µM zinc chloride
Protein Concentration:	***batch specific*** mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: Metalloendopeptidase OMA1 (4 µg)
Lane 3: Metalloendopeptidase OMA1 (2 µg)

Representative gel image shown; actual purity may vary between each batch.

Cayman's OMA1 has an expected size of 37.1 kDa, though SDS-PAGE shows it running closer to 30 kDa. We have confirmed the 30 kDa band is OMA1 by mass spectrometry.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/20/2019

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION

Description

OMA1 is an ATP-independent metalloproteinase encoded by *OMA1*.[1] It is localized to the mitochondrial inner membrane and is comprised of a matrix-facing N-terminal domain, a transmembrane domain, and a C-terminal M48 metallopeptidase domain that is exposed to the intermembrane space.[1,2] Under various stress conditions, including oxidative stress, heat stress, and mitochondrial membrane depolarization, OMA1 is activated and cleaves long isoforms of the GTPase optic atrophy 1 (OPA1) at the S1 cleavage site, leading to inhibition of mitochondrial fusion and increased mitochondrial fragmentation.[1-3] Under stress conditions, OMA1 is also autocatalytically degraded, thereby limiting, and allowing for reversal of, the stress response.[2,3] *Oma1*$^{-/-}$ mouse embryonic fibroblasts exhibit a loss of mitochondrial fragmentation upon exposure to hydrogen peroxide.[2] Mice lacking *Oma1* exhibit impaired thermogenesis, increased hepatic steatosis and serum triglyceride levels, and high-fat diet-induced obesity.[4] Cayman's Metalloendopeptidase OMA1 (human, recombinant) can be used for Western blot and ELISA applications.

References

1. Levytskyy, R.M., Bohovych, I., and Khalimonchuk, O. Metalloproteases of the inner mitochondrial membrane. *Biochemistry* **56(36)**, 4737-4746 (2017).
2. Baker, M.J., Lampe, P.A., Stojanovski, D., *et al*. Stress-induced OMA1 activation and autocatalytic turnover regulate OPA1-dependent mitochondrial dynamics. *EMBO J*. **33(6)**, 578-593 (2014).
3. Quirós, P.M., Langer, T., and López-Otín, C. New roles for mitochondrial proteases in health, ageing and disease. *Nat. Rev. Mol. Cell Biol*. **16(6),** 345-359 (2015).
4. Quirós, P.M., Ramsay, A.J., Sala, D., *et al*. Loss of mitochondrial protease OMA1 alters processing of the GTPase OPA1 and causes obesity and defective thermogenesis in mice. *EMBO J*. **31(9),** 2117-2133 (2012).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM