

UBE1DC1 / UBA5 Antibody (aa281-330)
Rabbit Polyclonal Antibody
Catalog # ALS14636**Specification**

UBE1DC1 / UBA5 Antibody (aa281-330) - Product Information

Application	WB, IHC
Primary Accession	O9GZZ9
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	45kDa KDa

UBE1DC1 / UBA5 Antibody (aa281-330) - Additional Information**Gene ID** 79876**Other Names**

Ubiquitin-like modifier-activating enzyme 5, Ubiquitin-activating enzyme 5, ThiFP1, UFM1-activating enzyme, Ubiquitin-activating enzyme E1 domain-containing protein 1, UBA5, UBE1DC1

Target/Specificity

UBA5 Antibody detects endogenous levels of total UBA5 protein.

Reconstitution & Storage

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions

UBE1DC1 / UBA5 Antibody (aa281-330) is for research use only and not for use in diagnostic or therapeutic procedures.

UBE1DC1 / UBA5 Antibody (aa281-330) - Protein Information**Name** UBA5 {ECO:0000303|PubMed:15071506, ECO:0000312|HGNC:HGNC:23230}**Function**

E1-like enzyme which specifically catalyzes the first step in ufmylation (PubMed:15071506, PubMed:18442052, PubMed:25219498, PubMed:20368332, PubMed:27653677, PubMed:26929408, PubMed:27545674, PubMed:30412706, PubMed:27545681). Activates UFM1 by first adenylating its C-terminal glycine residue with ATP, and thereafter linking this

residue to the side chain of a cysteine residue in E1, yielding a UFM1- E1 thioester and free AMP (PubMed:20368332, PubMed:27653677, PubMed:26929408, PubMed:30412706). Activates UFM1 via a trans-binding mechanism, in which UFM1 interacts with distinct sites in both subunits of the UBA5 homodimer (PubMed:27653677). Trans-binding also promotes stabilization of the UBA5 homodimer, and enhances ATP-binding (PubMed:29295865). Transfer of UFM1 from UBA5 to the E2-like enzyme UFC1 also takes place using a trans mechanism (PubMed:27653677). Ufmylation is involved in reticulophagy (also called ER-phagy) induced in response to endoplasmic reticulum stress (PubMed:32160526). Ufmylation is essential for erythroid differentiation of both megakaryocytes and erythrocytes (By similarity).

Cellular Location

Cytoplasm. Nucleus Endoplasmic reticulum membrane. Golgi apparatus. Note=Localizes mainly in the cytoplasm, while it localizes to the nucleus in presence of SUMO2 (PubMed:18442052). Interaction with GABARAPL2 promotes localization to the endoplasmic reticulum membrane (PubMed:30990354)

Tissue Location

Widely expressed..

Volume

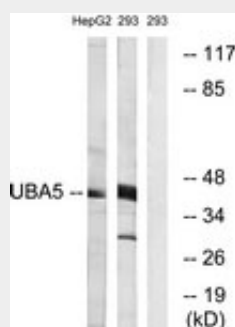
50 µl

UBE1DC1 / UBA5 Antibody (aa281-330) - Protocols

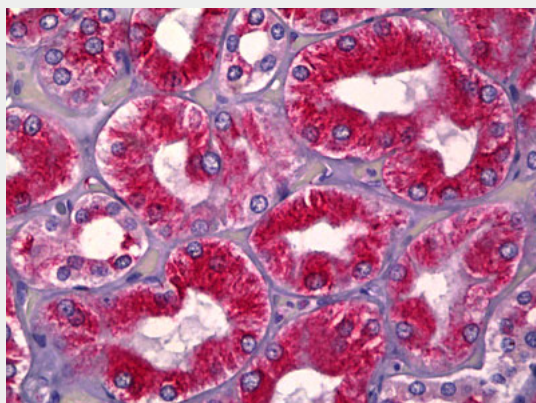
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

UBE1DC1 / UBA5 Antibody (aa281-330) - Images



Western blot of extracts from HepG2/293 cells, using UBA5 Antibody.



Anti-UBA5 antibody IHC of human kidney, tubules.

UBE1DC1 / UBA5 Antibody (aa281-330) - Background

E1-like enzyme which activates UFM1 and SUMO2.

UBE1DC1 / UBA5 Antibody (aa281-330) - References

Komatsu M., et al. EMBO J. 23:1977-1986(2004).
Dou T., et al. Mol. Biol. Rep. 32:265-271(2005).
Wiemann S., et al. Genome Res. 11:422-435(2001).
Ota T., et al. Nat. Genet. 36:40-45(2004).
Muzny D.M., et al. Nature 440:1194-1198(2006).