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Anti-UBA5 Antibody
Rabbit polyclonal antibody to UBA5
Catalog # AP60415

Specification

Anti-UBA5 Antibody - Product Information

Application	**WB, IH**
Primary Accession	Q9GZZ9
Other Accession	Q8VE47
Reactivity	**Human, Mouse, Rat, Monkey**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**44863**

Anti-UBA5 Antibody - Additional Information

Gene ID 79876

Other Names
UBE1DC1; Ubiquitin-like modifier-activating enzyme 5; Ubiquitin-activating enzyme 5; ThiFP1; UFM1-activating enzyme; Ubiquitin-activating enzyme E1 domain-containing protein 1

Target/Specificity
Recognizes endogenous levels of UBA5 protein.

Dilution
WB~~WB (1/500 - 1/1000), IH (1/100 - 1/200)
IH~~WB (1/500 - 1/1000), IH (1/100 - 1/200)

Format
Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

Storage
Store at -20 °C.Stable for 12 months from date of receipt

Anti-UBA5 Antibody - 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:<a

href="http://www.uniprot.org/citations/27545674" target="_blank">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..

Anti-UBA5 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-UBA5 Antibody - Images

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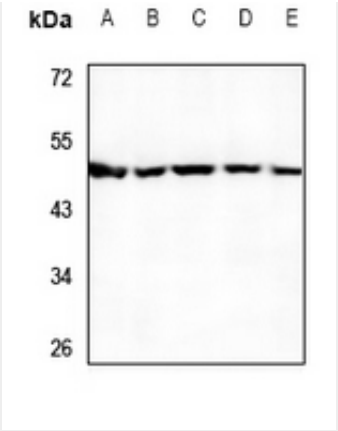
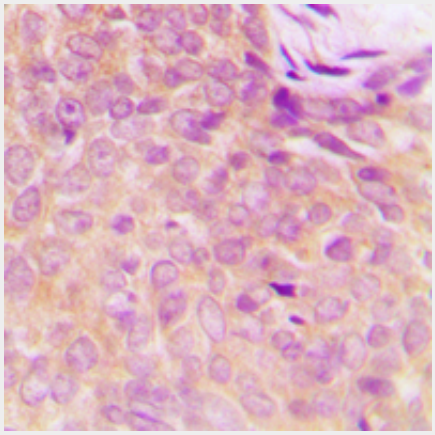


Western blot analysis of UBA5 expression in C6 (A), CT26 (B), A549 (C), HepG2 (D), HCT116 (E) whole cell lysates.



Immunohistochemical analysis of UBA5 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Anti-UBA5 Antibody - Background

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human UBA5. The exact sequence is proprietary.