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Uba5 Polyclonal Antibody

Catalog # AP72978

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	Q9GZZ9
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	44863

Additional Information

Gene ID	79876
Other Names	UBA5; UBE1DC1; Ubiquitin-like modifier-activating enzyme 5; Ubiquitin-activating enzyme 5; ThiFP1; UFM1-activating enzyme; Ubiquitin-activating enzyme E1 domain-containing protein 1
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/5000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

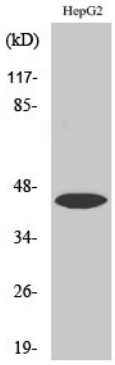
Name	UBA5 {ECO:0000303|PubMed:15071506, ECO:0000312|HGNC:HGNC:23230}
Function	E1-like enzyme which specifically catalyzes the first step in ufmylation (PubMed:15071506, PubMed:18442052, PubMed:20368332, PubMed:25219498, PubMed:26929408, PubMed:27545674, PubMed:27545681, PubMed:27653677, PubMed:30412706, PubMed:30626644, PubMed:34588452). 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:26929408, PubMed:27653677, 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, PubMed:34588452). Ufmylation plays a key role in various processes, such as ribosome recycling, response to DNA

	damage, interferon response or reticulophagy (also called ER-phagy) (PubMed:30412706, PubMed:32160526, PubMed:35394863). 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..

Background

E1-like enzyme which activates UFM1 and SUMO2.

Images



Western Blot analysis of various cells using Uba5 Polyclonal Antibody. Secondary antibody was diluted at 1:20000

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.