

HECT E3 ubiquitin ligase Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP55999

Product Information

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q9UII4
Reactivity	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	116852
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human HECT E3 ubiquitin ligase
Epitope Specificity	1-100/1024
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm, perinuclear region. Note=Associated with the polyribosomes, probably via the 60S subunit.
SIMILARITY	Contains 1 HECT (E6AP-type E3 ubiquitin-protein ligase) domain. Contains 5 RCC1 repeats.
SUBUNIT	Binds to CCNA1, CCNB1, CCND1 and CCNE1. Interacts with UBE2L6. Interacts with IRF3, this interaction is marginal in resting cells but enhanced upon viral infection.
Post-translational modifications	ISGylated (Probable).
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	HECT E3 ubiquitin ligase is a member of the HERC family of ubiquitin ligases and encodes a protein with a HECT domain and five RCC1 repeats. Pro-inflammatory cytokines upregulate expression of this gene in endothelial cells. The protein localizes to the cytoplasm and perinuclear region and functions as an interferon-induced E3 protein ligase that mediates ISGylation of protein targets. The gene lies in a cluster of HERC family genes on chromosome 4.

Additional Information

Gene ID	51191
Other Names	E3 ISG15--protein ligase HERC5, 2.3.2.-, Cyclin-E-binding protein 1, HECT domain and RCC1-like domain-containing protein 5, HERC5, CEB1, CEBP1
Target/Specificity	Expressed in testis and to a lesser degree in brain, ovary and placenta. Found in most tissues at low levels.

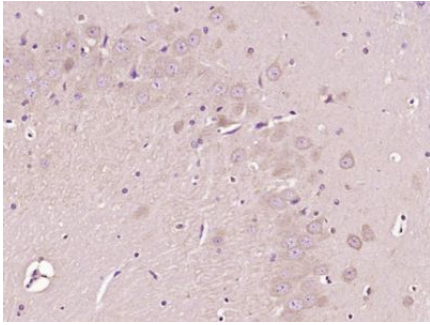
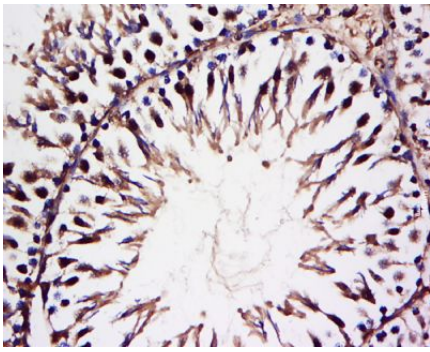
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	HERC5
Synonyms	CEB1, CEBP1
Function	Major E3 ligase for ISG15 conjugation (PubMed: 26355087 , PubMed: 27534820 , PubMed: 27564865 , PubMed: 34572049 , PubMed: 37279284). Acts as a positive regulator of innate antiviral response in cells induced by interferon. Functions as part of the ISGylation machinery that recognizes target proteins in a broad and relatively non-specific manner. Catalyzes ISGylation of IRF3 which results in sustained activation, it attenuates IRF3-PIN1 interaction, which antagonizes IRF3 ubiquitination and degradation, and boosts the antiviral response. Mediates ISGylation of the phosphatase PTEN leading to its degradation, thus alleviating its suppression of the PI3K-AKT signaling pathway and promoting the production of cytokines that facilitate bacterial clearance (PubMed: 37279284). Interferes with the function of key viral structural proteins such as ebolavirus structural protein VP40 or HIV-1 protein GAG (PubMed: 22093708 , PubMed: 34572049). Catalyzes ISGylation of influenza A viral NS1 which attenuates virulence; ISGylated NS1 fails to form homodimers and thus to interact with its RNA targets. Catalyzes ISGylation of papillomavirus type 16 L1 protein which results in dominant-negative effect on virus infectivity. Physically associated with polyribosomes, broadly modifies newly synthesized proteins in a cotranslational manner. In an interferon-stimulated cell, newly translated viral proteins are primary targets of ISG15. Promotes parkin/PRKN ubiquitin E3 ligase activity by suppressing the intramolecular interaction that maintains its autoinhibited conformation (PubMed: 27534820).
Cellular Location	Cytoplasm, perinuclear region. Cytoplasm Note=Associated with the polyribosomes, probably via the 60S subunit
Tissue Location	Expressed in testis and to a lesser degree in brain, ovary and placenta. Found in most tissues at low levels

Images

Tissue/cell: Rat testis tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
 Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
 Incubation: Anti-CEB1 Polyclonal Antibody, Unconjugated(AP55999) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (HECT E3 ubiquitin ligase) Polyclonal Antibody, Unconjugated (AP55999) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

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