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HERC5 antibody - N-terminal region

Rabbit Polyclonal Antibody
Catalog # AI12234

Product Information

Application	WB
Primary Accession	Q9UII4
Other Accession	NM_016323, NP_057407
Reactivity	Human, Dog, Bovine
Predicted	Human, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	116852

Additional Information

Gene ID	51191
Alias Symbol	CEB1, CEBP1
Other Names	E3 ISG15--protein ligase HERC5, 6.3.2.-, Cyclin-E-binding protein 1, HECT domain and RCC1-like domain-containing protein 5, HERC5, CEB1, CEBP1
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-HERC5 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	HERC5 antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HERC5 {ECO:0000303|PubMed:38421872, ECO:0000312|HGNC:HGNC:24368}
Function	Major E3 ligase for ISG15 conjugation (PubMed: 16407192, PubMed:16815975, PubMed:16884686, PubMed:20308324, PubMed:20542004, PubMed:26355087, PubMed:27534820, PubMed:27564865, PubMed:37279284, PubMed:38421872, PubMed:38652662, PubMed:40184173). Functions as part of the ISGylation machinery that recognizes target proteins in a broad and relatively non-specific manner (PubMed:16407192, PubMed:16815975, PubMed:16884686, PubMed:20308324, PubMed:20542004, PubMed:26355087, PubMed:27534820, PubMed:27564865,

PubMed:37279284). Physically associated with polyribosomes, broadly modifies newly synthesized proteins in a cotranslational manner (PubMed:20542004). Acts as a positive regulator of innate antiviral response in cells induced by interferon by mediating ISGylation of proteins involved in innate immunity, such as CGAS, IRF3, IFIH1/MDA5 and STING1 (PubMed:16815975, PubMed:20308324, PubMed:38421872, PubMed:38652662, PubMed:40184173). 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 (PubMed:20308324). Also regulates innate antiviral response by mediating ISGylation of CGAS and STING1, thereby promoting activation of cGAS-STING signaling (PubMed:38421872, PubMed:38652662). Catalyzes ISGylation of IFIH1/MDA5, promoting IFIH1/MDA5 oligomerization and immune signal transduction (PubMed:40184173). Also regulates innate immunity by catalyzing ISGylation of viral proteins: newly translated viral proteins are primary targets of ISG15 in interferon-stimulated cells (PubMed:20133869, PubMed:20385878, PubMed:20542004, PubMed:22093708, PubMed:34572049). 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 (PubMed:20133869, PubMed:20385878). Catalyzes ISGylation of papillomavirus type 16 L1 protein which results in dominant-negative effect on virus infectivity (PubMed:20542004). 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). 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.

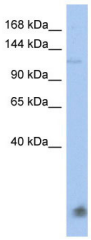
Tissue Location

Expressed in testis and to a lesser degree in brain, ovary and placenta. Found in most tissues at low levels

References

Salon,C.,(2007)Oncogene26(48),6927-6936ReconstitutionandStorage:Forshorttermuse,storeat2-8Cupto1week.Forlongtermstorage,storeat-20Cinsmallaliquotstopreventfreeze-thawcycles.

Images



WB Suggested Anti-HERC5 Antibody Titration: 0.2-1 µg/ml
ELISA Titer: 1:62500
Positive Control: HT1080 cell lysate

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