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NIRF Rabbit pAb

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Catalog # AP58432

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q96PU4
Predicted	Human, Mouse, Rat, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	89985
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human NIRF
Epitope Specificity	15-100/802
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	Nucleus. Note=Enriched at pericentric heterochromatin (PH). This localization is dependent on the interaction with H3K9me3.
SIMILARITY	Contains 1 PHD-type zinc finger. Contains 1 RING-type zinc finger. Contains 1 ubiquitin-like domain. Contains 1 YDG domain.
SUBUNIT	Homodimer; disulfide-linked. Binds methylated CpG containing oligonucleotides. Interacts with H3: the interaction has a preference for the 'Lys-9' trimethylated form of H3 (H3K9me3). Interacts with PCNP, HDAC1 and CDK2 (inactive form). Component of a complex at least composed of UHRF2, CDK2 and CCNE1. Interacts directly with CCNE1; the interaction ubiquitinates CCNE1 and appears independent of CCNE1 phosphorylation. Interacts with CCND1; the interaction ubiquitinates CCND1 and appears independent of CCND1 phosphorylation. Interacts with p53/TP53 and RB1. Interacts with UBE2I.
Post-translational modifications	May be autoubiquitinated; which may lead to proteasomal degradation. Phosphorylated. Phosphorylation may be mediated by CDK2. Autosumoylated.
DISEASE	Note=Associated with various cancers. DNA copy number loss is found in multiple kinds of malignancies originating from the brain, breast, stomach, kidney, hematopoietic tissue and lung.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	E3 ubiquitin-protein ligase which mediates ubiquitination and subsequent proteasomal degradation of PCNP. May participate in methylation-dependent transcriptional regulation. Important for G1/S transition. Overexpression causes G1 phase cell arrest.

Additional Information

Gene ID	115426

Other Names	E3 ubiquitin-protein ligase UHRF2, 2.3.2.27, Np95/ICBP90-like RING finger protein, Np95-like RING finger protein, Nuclear protein 97, Nuclear zinc finger protein Np97, RING finger protein 107, RING-type E3 ubiquitin transferase UHRF2, Ubiquitin-like PHD and RING finger domain-containing protein 2, Ubiquitin-like-containing PHD and RING finger domains protein 2, UHRF2, NIRF, RNF107
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
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	UHRF2
Synonyms	NIRF, RNF107
Function	E3 ubiquitin ligase that plays important roles in DNA methylation, histone modifications, cell cycle and DNA repair (PubMed:15178429, PubMed:23404503, PubMed:27743347, PubMed:29506131). Acts as a specific reader for 5-hydroxymethylcytosine (5hmC) and thereby recruits various substrates to these sites to ubiquitinate them (PubMed:24813944, PubMed:27129234). This activity also allows the maintenance of 5mC levels at specific genomic loci and regulates neuron-related gene expression (By similarity). Participates in cell cycle regulation by ubiquitinating cyclins CCND1 and CCNE1 and thereby inducing G1 arrest (PubMed:15178429, PubMed:15361834, PubMed:21952639). Also ubiquitinates PCNP leading to its degradation by the proteasome (PubMed:12176013, PubMed:14741369). Plays an active role in DNA damage repair by ubiquitinating p21/CDKN1A leading to its proteasomal degradation (PubMed:29923055). Also promotes DNA repair by acting as an interstrand cross-links (ICLs) sensor. Mechanistically, cooperates with UHRF1 to ensure recruitment of FANCD2 to ICLs, leading to FANCD2 monoubiquitination and subsequent activation (PubMed:30335751). Contributes to UV-induced DNA damage response by physically interacting with ATR in response to irradiation, thereby promoting ATR activation (PubMed:33848395).
Cellular Location	Nucleus {ECO:0000255|PROSITE-ProRule:PRU00358, ECO:0000269|PubMed:12176013, ECO:0000269|PubMed:23404503, ECO:0000269|PubMed:27129234, ECO:0000269|PubMed:27743347, ECO:0000269|PubMed:29923055, ECO:0000269|PubMed:30335751}. Chromosome. Note=Enriched at genomic loci that are enriched for 5-hydroxymethylcytosine (5hmC)

Background

E3 ubiquitin-protein ligase which mediates ubiquitination and subsequent proteasomal degradation of PCNP. May participate in methylation-dependent transcriptional regulation. Important for G1/S transition. Overexpression causes G1 phase cell arrest.