10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RF1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO2222a

Product Information

Application	WB, FC, E
Primary Accession	P62495
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4F9H12
Isotype	IgG1
Calculated MW	49031
Description	This gene encodes a class-1 polypeptide chain release factor. The encoded protein plays an essential role in directing termination of mRNA translation from the termination codons UAA, UAG and UGA. This protein is a component of the SURF complex which promotes degradation of prematurely terminated mRNAs via the mechanism of nonsense-mediated mRNA decay (NMD). Alternate splicing results in multiple transcript variants. Pseudogenes of this gene are found on chromosomes 6, 7, and X.
Immunogen	Purified recombinant fragment of human RF1 (AA: 288-437) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	2107
Other Names	Eukaryotic peptide chain release factor subunit 1, Eukaryotic release factor 1, eRF1, Protein Cl1, TB3-1, ETF1, ERF1, RF1, SUP45L1
Dilution	WB~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	RF1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ETF1

Synonyms	ERF1, RF1, SUP45L1
Function	Component of the eRF1-eRF3-GTP ternary complex, a ternary complex that mediates translation termination in response to the termination codons (PubMed:10676813, PubMed:16777602, PubMed:24486019, PubMed:26245381, PubMed:27863242, PubMed:36638793, PubMed:7990965). The eRF1-eRF3-GTP complex binds to a stop codon in the ribosomal A-site (PubMed:26245381, PubMed:27863242, PubMed:36638793). ETF1/ERF1 is responsible for stop codon recognition and inducing hydrolysis of peptidyl-tRNA (PubMed:26245381, PubMed:27863242, PubMed:36638793). Following GTP hydrolysis, eRF3 (GSPT1/ERF3A or GSPT2/ERF3B) dissociates, permitting ETF1/eRF1 to accommodate fully in the A-site and mediate hydrolysis of peptidyl-tRNA (PubMed:10676813, PubMed:16777602, PubMed:26245381, PubMed:27863242). Component of the transient SURF complex which recruits UPF1 to stalled ribosomes in the context of nonsense-mediated decay (NMD) of mRNAs containing premature stop codons (PubMed:19417104). Required for SHFL-mediated translation termination which inhibits programmed ribosomal frameshifting (-1PRF) of mRNA from viruses and cellular genes (PubMed:30682371).
Cellular Location	Cytoplasm.

References

1.Nucleic Acids Res. 2013 Apr;41(8):4573-86. 2.Protein Sci. 2012 Jun;21(6):896-903.

Images

