10320 Camino Santa Fe, Suite G
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RF1 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO2222a

Specification

RF1 Antibody - Product Information

Application	**E, WB, FC**
Primary Accession	P62495
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**49kDa KDa**

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

RF1 Antibody - 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
E~~1/10000
WB~~1/200 - 1/1000
FC~~1/200 - 1/400

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.

RF1 Antibody - Protein Information

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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:7990965, PubMed:10676813, PubMed:16777602, PubMed:24486019, PubMed:26245381, PubMed:27863242, PubMed:36638793). 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.

RF1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture