

Product Name: EWS Rabbit Polyclonal Antibody
Catalog #: APRab10653



Summary

Production Name	EWS Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,ELISA
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	EWSR1
Alternative Names	EWSR1; EWS; RNA-binding protein EWS; EWS oncogene; Ewing sarcoma breakpoint region 1 protein
Gene ID	2130.0
SwissProt ID	Q01844.The antiserum was produced against synthesized peptide derived from human EWSR1. AA range:403-452

Application

Dilution Ratio	WB 1:500-1:2000, ELISA 1:10000.Not yet tested in other applications.
Molecular Weight	68kDa

Background

This gene encodes a multifunctional protein that is involved in various cellular processes, including gene expression, cell signaling, and RNA processing and transport. The protein includes an N-terminal transcriptional activation domain and a C-terminal RNA-binding domain. Chromosomal translocations between this gene and various genes encoding transcription factors result in the production of chimeric proteins that are involved in tumorigenesis. These chimeric proteins usually consist of the N-terminal transcriptional activation domain of this protein fused to the C-terminal DNA-binding domain of the transcription factor protein. Mutations in this gene, specifically a t(11;22)(q24;q12) translocation, are known to cause Ewing sarcoma as well as neuroectodermal and various other tumors. Alternative splicing of this gene results in multiple transcript variants. Related pseudogenes have been identified.

disease:A chromosomal aberration involving EWSR1 is associated with desmoplastic small round cell tumor (DSRCT). Translocation t(11;22)(p13;q12) with WT1.

disease:A chromosomal aberration involving EWSR1 is associated with malignant melanoma of soft parts (MMSP). Translocation t(12;22)(q13;q12) with ATF-1. Malignant melanoma of soft parts, also known as soft tissue clear cell sarcoma, is a rare tumor developing in tendons and aponeuroses.

disease:A chromosomal aberration involving EWSR1 is associated with small round cell sarcoma. Translocation t(11;22)(p36.1;q12) with PATZ1.

disease:Chromosomal aberrations involving EWSR1 are a cause of Ewing sarcoma [MIM:133450]. Translocation t(11;22)(q24;q12) with FLI1; translocation t(7;22)(p22;q12) with ETV1; translocation t(21;22)(q22;q12) with ERG; translocation t(9;22)(q22-31;q11-12) with NR4A3. Translocation t(2;21;22)(q23;q22;q12) that forms a EWSR1-FEV fusion protein with potential oncogenic activity.

disease:Chromosomal aberrations involving EWSR1 are associated with angiomatoid fibrous histiocytoma (AFH) [MIM:612160]. Translocation t(12;22)(q13;q12) with ATF1 generates a chimeric EWSR1/ATF1 protein. Translocation t(2;22)(q33;q12) with CREB1 generates a EWSR1/CREB1 fusion gene that is most common genetic abnormality in this tumor type.

domain:EWS activation domain (EAD) functions as a potent activation domain in EFPS. EWSR1 binds POLR2C but not POLR2E or POLR2G, whereas the isolated EAD binds POLR2E and POLR2G but not POLR2C. Cis-linked RNA-binding domain (RBD) can strongly and specifically repress trans-activation by the EAD.

function:Might normally function as a repressor. EWS-fusion-proteins (EFPS) may play a role in the tumorigenic process. They may disturb gene expression by mimicking, or interfering with the normal function of CTD-POLII within the transcription initiation complex. They may also contribute to an aberrant activation of the fusion protein target genes.

miscellaneous:Binds calmodulin in the presence, but not in the absence, of calcium ion.

miscellaneous:EFPS arise due to chromosomal translocations in which EWSR1 is fused to a variety of cellular transcription factors. EFPS are very potent transcriptional activators dependent on the EAD and a C-terminal DNA-binding domain contributed by the fusion partner. The spectrum of malignancies associated with EFPS are thought to arise via EFP-induced transcriptional deregulation, with the tumor phenotype specified by the EWSR1 fusion partner and cell type. Transcriptional repression of the transforming growth factor beta type II receptor (TGF beta RII) is an important target of the EWS-FLI1, EWS-ERG, or EWS-ETV1 oncogene.

PTM:Highly methylated on arginine residues. Methylation is mediated by PRMT1 and, at lower level by PRMT8.

PTM:Phosphorylated; calmodulin-binding inhibits phosphorylation of Ser-266.

similarity:Belongs to the ETS family.

similarity:Belongs to the RRM TET family.

similarity:Contains 1 ETS DNA-binding domain.

similarity:Contains 1 IQ domain.

similarity:Contains 1 RanBP2-type zinc finger.

similarity:Contains 1 RRM (RNA recognition motif)

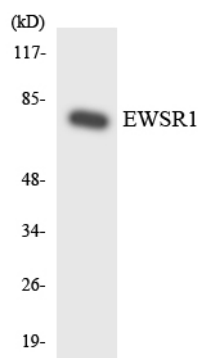
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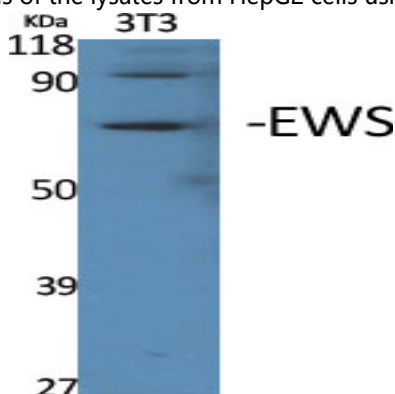
domain.,subcellular location:Relocates from cytoplasm to ribosomes upon PTK2B/FAK2 activation.,subunit:Binds POLR2C, SF1, calmodulin and RNA. Interacts with PTK2B/FAK2 and TDRD3.,tissue specificity:Ubiquitous.,

Research Area

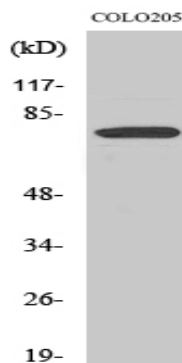
Image Data



Western blot analysis of the lysates from HepG2 cells using EWSR1 antibody.



Western Blot analysis of various cells using EWS Polyclonal Antibody



Western Blot analysis of COLO205 cells using EWS Polyclonal Antibody

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Note

For research use only.