

Rabbit Anti-EWSR1 antibody

SL10552R

Product Name EWSR1

Chinese Name 尤文氏肉瘤相关 EWS 蛋白抗体

Alias bK984G1.4; bK984G1.4 Ewing sarcoma breakpoint region 1 protein; Ewing sarcoma breakpoint region 1 protein; Ewings sarcoma EWS Fli1 type 1 oncogene; EWS; EWS_HUMAN; EWSR 1; Ewsr1; EWSR1 protein; RNA binding protein EWS; RNA-binding protein

Research Area Tumour Cell biology Signal transduction transcriptional regulatory factor Epigenetics

Immunogen Species Rabbit

Clonality Polyclonal

React Species (predicted: Human, Mouse, Rat, Dog, Pig, Cow, Rabbit,)

WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA
(Paraffin sections need antigen repair)

Applications not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 68kDa

Cellular localization The nucleus cytoplasmic The cell membrane

Form Liquid

Concentration 1mg/ml

immunogen KLH conjugated synthetic peptide derived from human EWSR1: 351-450/656

Lsotype IgG

Purification affinity purified by Protein A

Buffer Solution 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed [PubMed](#)

EWS is a nuclear RNA-binding protein. As a result of chromosome translocation, the EWS gene is fused to a variety of transcription factors, including ATF-1 in human neoplasias. In the Ewing family of tumors, the N-terminal domain of EWS is fused to the DNA-binding domain of various ETS transcription factors including Fli-1, Erg, ETV1, E1AF and FEV. The EWS/Fli-1 chimeric protein acts as a more potent transcription factor than Fli-1 and can promote cell transformation. Two functional regions have been identified in EWS: an amino-terminal region (domain A), that has little transactivation activity but transforms efficiently when fused to Fli-1, and a distal region (domain B), which shows transactivation activity but transforms less efficiently when fused to Fli-1.

Function:

Might normally function as a repressor. EWS-fusion-proteins (EFPS) may play a role in the tumorigenesis. They may disturb gene expression by mimicking, or interfering with the normal function of CTD of RNA polymerase II, the transcription initiation complex. They may also contribute to an aberrant activation of the fusion partner target genes.

Subunit:

Binds POLR2C, SF1, calmodulin and RNA. Interacts with PTK2B/FAK2 and TDRD3. Binds calcium ion in the presence, but not in the absence, of calcium ion.

Subcellular Location:

Nucleus. Cytoplasm. Cell membrane. Relocates from cytoplasm to ribosomes upon PTK2B/FAK2 activation.

**Product
Detail**

Tissue Specificity:

Ubiquitous.

Post-translational modifications:

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

Highly methylated on arginine residues. Methylation is mediated by PRMT1 and, at lower level by PRMT4.

DISEASE:

Defects in EWSR1 are a cause of Ewing sarcoma (ES) [MIM:612219]. A highly malignant, metastasizing, small round cell tumor of bone and soft tissue that affects children and adolescents. It belongs to the Ewing sarcoma family of tumors, a group of morphologically heterogeneous neoplasms that share the same histological features. They are considered neural tumors derived from cells of the neural crest. Ewing sarcoma is a less differentiated form of the tumors. Note=Chromosomal aberrations involving EWSR1 are found in association with Ewing sarcoma. Translocation t(11;22)(q24;q12) with FLI1; translocation t(7;22)(p22;q12) with EWSR1; 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. Note=A chromosomal aberration involving EWSR1 is associated with desmoplastic small round cell tumor (DSRCT). Translocation t(11;22)(p13;q12) with WT1.

Note=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 tissue clear cell sarcoma, is a rare tumor developing in tendons and aponeuroses.

Note=A chromosomal aberration involving EWSR1 is associated with small round cell sarcoma of soft tissue.

t(11;22)(p36.1;q12) with PATZ1.

Defects in EWSR1 may be a cause of angiomatoid fibrous histiocytoma (AFH) [MIM:612160], a variant of malignant fibrous histiocytoma that typically occurs in children and adolescents and is a nodular subcutaneous growth. Characteristic microscopic features include lobulated sheets of histiocytes intimately associated with areas of hemorrhage and cystic pseudovascular spaces, as well as cuffing of inflammatory cells, mimicking a lymph node metastasis. Note=Chromosomal aberrations involving EWSR1 are found in patients with angiomatoid fibrous histiocytoma. Translocation t(12;22)(q13;q11) involving EWSR1 and ATF1 generates a chimeric EWSR1/ATF1 protein. Translocation t(2;22)(q33;q12) with CREB1 involving EWSR1 and CREB1 generates a fusion gene that is most common genetic abnormality in this tumor type. Note=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 DNA-binding domain contributed by the fusion partner. The spectrum of malignancies associated with EFPS is thought to arise via EFP-induced transcriptional deregulation, with the tumor phenotype specified by the fusion partner and cell type. Transcriptional repression of the transforming growth factor beta type II (TGF beta RII) is an important target of the EWS-FLI1, EWS-ERG, or EWS-ETV1 oncogene.

Similarity:

Belongs to the RRM TET family.

Contains 1 IQ domain.

Contains 1 RanBP2-type zinc finger.

Contains 1 RRM (RNA recognition motif) domain.

SWISS:

Q01844

Gene ID:

2130

Database links:

[Entrez Gene: 2130](#) Human

[Entrez Gene: 14030](#) Mouse

[Entrez Gene: 289752](#) Rat

[Omim: 133450](#) Human

[SwissProt: Q01844](#) Human

[SwissProt: Q61545](#) Mouse

[Unigene: 374477](#) Human

[Unigene: 142822](#) Mouse

[Unigene: 52785](#) Rat



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