abcam

Product datasheet

Anti-EWSR1/EWS antibody [EPR4648] ab133318

Recombinant RabMAb

1 Abreviews 1 References 4 Images

Overview

Product name	Anti-EWSR1/EWS antibody [EPR4648]
Description	Rabbit monoclonal [EPR4648] to EWSR1/EWS
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P **Unsuitable for:** Flow Cyt or IP
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat
Immunogen	Synthetic peptide within Human EWSR1/EWS aa 300-400. The exact sequence is proprietary.
Positive control	K562, HeLa, Jurkat and F9 cell lysates; Human colon and spleen tissues.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.2 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR4648

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab133318 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★☆☆☆ (1)	1/1000 - 1/10000. Detects a band of approximately 90 kDa (predicted molecular weight: 68 kDa).
IHC-P		1/500 - 1/1000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Application notes Is unsuitable for Flow Cyt or IP.

Target

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.

Tissue specificity Ubiquitous.

Involvement in disease Defects in EWSR1 are a cause of Ewing sarcoma (ES) [MIM:612219]. A highly malignant, metastatic, primitive 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 cytogenetic features. They are considered neural tumors derived from cells of the neural crest. Ewing sarcoma represents the less differentiated form of the tumors. Note=Chromosomal aberrations involving EWSR1 are found in patients with Ewing sarcoma. 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.
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 soft 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. Translocation t(11;22)(p36.1;q12) with PATZ1.
Defects in EWSR1 may be a cause of angiomatoid fibrous histiocytoma (AFH) [MIM:612160]. A distinct variant of malignant fibrous histiocytoma that typically occurs in children and adolescents and is manifest by nodular subcutaneous growth. Characteristic microscopic features include lobulated sheets of histiocyte-like cells intimately associated with areas of hemorrhage and cystic pseudovascular spaces, as well as a striking 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;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. 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 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.

Sequence similarities

Belongs to the RRM TET family.
Contains 1 IQ domain.
Contains 1 RanBP2-type zinc finger.
Contains 1 RRM (RNA recognition motif) domain.

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.

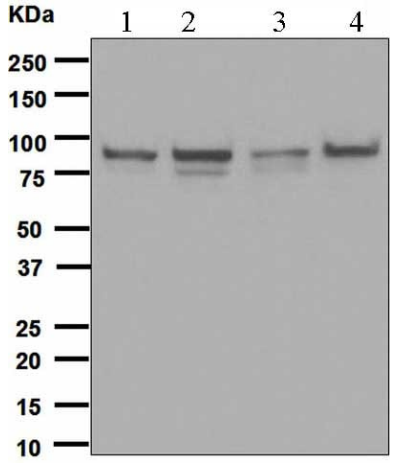
Post-translational modifications

Phosphorylated; calmodulin-binding inhibits phosphorylation of Ser-266.
Highly methylated on arginine residues. Methylation is mediated by PRMT1 and, at lower level by PRMT8.

Cellular localization

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

Images



Western blot - Anti-EWSR1/EWS antibody [EPR4648] (ab133318)

All lanes : Anti-EWSR1/EWS antibody [EPR4648] (ab133318) at 1/1000 dilution

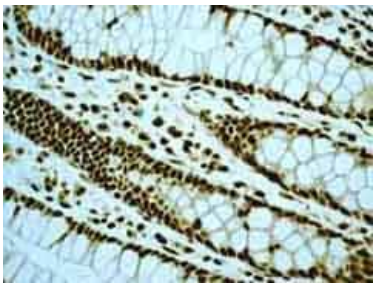
Lane 1 : K562 cell lysate
Lane 2 : HeLa cell lysate
Lane 3 : Jurkat cell lysate
Lane 4 : F9 cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat anti-Rabbit HRP at 1/2000 dilution

Predicted band size: 68 kDa

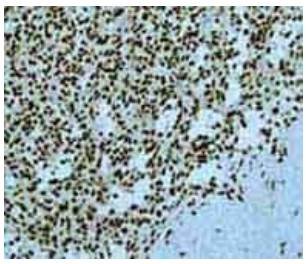
Secondary antibody - **anti-rabbit HRP** (**ab6721**)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EWSR1/EWS antibody [EPR4648] (ab133318)

Immunohistochemical analysis of Paraffin Embedded Human colon tissue labelling EWSR1/EWS with ab133318 at 1/500 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EWSR1/EWS antibody [EPR4648] (ab133318)

Immunohistochemical analysis of Paraffin Embedded Human spleen tissue labelling EWSR1/EWS with ab133318 at 1/500 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Anti-EWSR1/EWS antibody [EPR4648] (ab133318)

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet

- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors