

**EWS Antibody**

**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W, IP	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 85	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #Q01844	<b>Entrez-Gene Id:</b> 2130
-------------------------------	-----------------------------	-----------------------------------	------------------------	----------------------------------	-------------------------------	--------------------------------

**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation

**Dilution**

1:1000  
1:50

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

EWS Antibody recognizes endogenous levels of total EWS protein.

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly142 of human EWS protein. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

The Ewing sarcoma (EWS) protein is a member of the multifunctional FET (FUS, EWS, and TAF15) family of proteins (1,2). These proteins are RNA and DNA binding proteins that are thought to be important for both transcriptional regulation and RNA processing. EWS can be found as part of a fusion protein with various E-twenty six (ETS) family transcription factors, most commonly Fli-1, in the Ewing sarcoma family of tumors (1-4). The amino terminus of the EWS protein, containing the transcriptional activation domain, is fused to the DNA binding domain of the ETS transcription factor, causing aberrant expression of target genes (1-5). EWS interacts with the transcription initiation complex via TFIID and RNA polymerase II subunits, as well as transcriptional regulators, such as Brn3A and CBP/p300, which suggests a role for EWS in transcriptional regulation (1,6-9). EWS also interacts with multiple components of the splicing machinery, implicating a role for EWS in RNA processing (1,10-12). EWS regulates the expression of cyclin D1, which controls G1-S phase transition during the cell cycle, at the level of transcriptional activation and mRNA splicing. The EWS-Fli-1 fusion protein has been shown to promote the expression of the cyclin D1b splice variant in Ewing sarcoma cells (13). In addition, EWS regulates the DNA damage-induced alternative splicing of genes involved in DNA repair and stress response and is required for cell viability upon DNA damage (14). Consistent with these results, EWS knockout mice display hypersensitivity to ionizing radiation and premature cellular senescence, suggesting a role for EWS in homologous recombination and maintenance of genomic stability (15).

**Background References**

1. Law, W.J. et al. (2006) *Brief Funct Genomic Proteomic* 5, 8-14.
2. Kovar, H. (2011) *Sarcoma* 2011, 837474.
3. Delattre, O. et al. (1992) *Nature* 359, 162-5.
4. May, W.A. et al. (1993) *Mol Cell Biol* 13, 7393-8.
5. Sorensen, P.H. et al. (1994) *Nat Genet* 6, 146-51.
6. Bertolotti, A. et al. (1996) *EMBO J* 15, 5022-31.
7. Bertolotti, A. et al. (1998) *Mol Cell Biol* 18, 1489-97.
8. Araya, N. et al. (2003) *J Biol Chem* 278, 5427-32.
9. Thomas, G.R. and Latchman, D.S. *Cancer Biol Ther* 1, 428-32.
10. Chansky, H.A. et al. (2001) *Cancer Res* 61, 3586-90.
11. Yang, L. et al. (2000) *J Biol Chem* 275, 37612-8.
12. Knoop, L.L. and Baker, S.J. (2001) *J Biol Chem* 276, 22317-22.
13. Sanchez, G. et al. (2008) *Proc Natl Acad Sci U S A* 105, 6004-9.
14. Paronetto, M.P. et al. (2011) *Mol Cell* 43, 353-68.
15. Li, H. et al. (2007) *J Clin Invest* 117, 1314-23.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IP:** Immunoprecipitation

## Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat

## Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit [cellsignal.com/trademarks](http://cellsignal.com/trademarks) for more information.

## Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.