#2818 Store at -20°C

# Cripto Antibody (Mouse Specific)

✓ 100 µl
(10 western blots)

Cell Signaling TECHNOLOGY®

**Orders** ■ 877-616-CELL (2355)
orders@cellsignal.com
**Support** ■ 877-678-TECH (8324)
info@cellsignal.com
**Web** ■ www.cellsignal.com

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**This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.**

**Entrez-Gene ID** # 6997
**Swiss-Prot Acc.** # P13385 (H), P51865 (M)

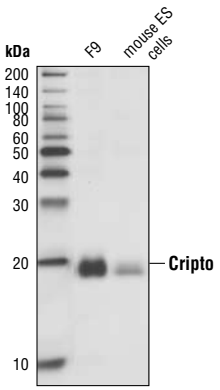
| Applications | Species Cross-Reactivity* | Molecular Wt. | Source |
|---|---|---|---|
| W, IP, IF-IC Endogenous | M | 18 kDa | Rabbit** |

**Background:** Cripto, also known as teratocarcinoma derived growth factor 1 (TDGF-1), belongs to the EGF-CFC family of proteins. Members of this family are characterized by an N-terminal signal peptide, a conserved cysteine rich domain (CFC motif), and a short hydrophobic carboxy-terminal tail that contains GPI cleavage and attachment sites. The GPI moiety anchors Cripto and family members to the extracellular plasma membrane (1). An *O*-linked fucosylation site within the EGF-like motif is required for Cripto and related family members to perform their function as co-receptors for TGF-β-related ligands such as Nodal and Vg1/GDF1 (2,3). Soluble forms of Cripto can be produced – these contain intact EGF and CFC domains, and are thought to have paracrine activities, as opposed to the autocrine activity of Cripto functioning as a coreceptor (4). Understanding of this paracrine activity is not complete, but it is proposed that Cripto may act as co-ligand for Nodal (3).

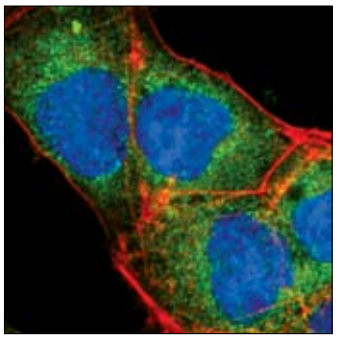
Cripto is an important modulator of embryogenesis and oncogenesis (4). It is highly expressed in early embryos, and in embryonic stem (ES) cells where it is involved in cardiomyocytic differentiation and acts as a negative regulator of neurogenesis (5-7). Transient activation of Cripto is essential for the capacity of stem cell self-renewal and pluripotency in ES cells, and in some adult derived stem cells (8). Signaling through Cripto can also stimulate other activities that promote tumorigenesis such as stimulation of proliferation, cell motility, invasion, angiogenesis and endothelial-to-mesenchymal transition (EMT) (9-11). Cripto is highly expressed in a broad range of tumors, where it acts as a potent oncogene.

**Specificity/Sensitivity:** Cripto Antibody detects endogenous levels of total mouse Cripto protein.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino acids near the amino terminus of mouse Cripto. Antibodies are purified by peptide affinity chromatography.




*Western blot analysis of extracts of F9 and mouse embryonic stem (ES) cells using Cripto Antibody.*



*Confocal immunofluorescent analysis of P19 cells using Cripto Antibody (Mouse Specific) (green). Actin filaments have been labeled with DY-554 phalloidin (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).*

**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.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

**Recommended Antibody Dilutions:**

| | |
|---|---|
| Western blotting | 1:1000 |
| Immunoprecipitation | 1:100 |
| Immunofluorescence (IF-IC) | 1:50 |

**Background References:**

(1) Minchiotti, G. et al. (2000) *Mech Dev* 90, 133–42.
(2) Schiffer, S.G. et al. (2001) *J Biol Chem* 276, 37769–78.
(3) Yan, Y.T. et al. (2002) *Mol Cell Biol* 22, 4439–49.
(4) Strizzi, L. et al. (2005) *Oncogene* 24, 5731–41.
(5) Xu, C. et al. (1998) *Dev Biol* 196, 237–47.
(6) Parisi, S. et al. (2003) *J Cell Biol* 163, 303–14.
(7) Minchiotti, G. (2005) *Oncogene* 24, 5668–75.
(8) Beachy, P.A. et al. (2004) *Nature* 432, 324–31.
(9) Wechselberger, C. et al. (2001) *Exp Cell Res* 266, 95–105.
(10) Bianco, C. et al. (2005) *J Natl Cancer Inst* 97, 132–41.
(11) Strizzi, L. et al. (2004) *J Cell Physiol* 201, 266–76

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

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**Applications Key:** **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

**Species Cross-Reactivity Key:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

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