

Cripto (D81B12) Rabbit mAb

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

Applications: W, IP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 20	Source/Isotype: Rabbit IgG	UniProt ID: #P13385	Entrez-Gene Id: 6997
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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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Cripto (D81B12) Rabbit mAb detects endogenous levels of total cripto protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to an amino acid sequence at the N-terminus of human cripto.

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 epithelial-mesenchymal transition (EMT) (9-11). Cripto is highly expressed in a broad range of tumors, where it acts as a potent oncogene.

Background References

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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.

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

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