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Datasheet for 600-401-997

Cripto-1 TDGF1 Antibody

Overview

Description:	Anti-Cripto-1 (TDGF1) (RABBIT) Antibody - 600-401-997
Item No.:	600-401-997
Size:	100 µg
Applications:	ELISA, WB, IHC
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	This antibody is designed, produced, and validated as part of a collaboration between Rockland and the National Cancer Institute (NCI) and is suitable for Cancer, Immunology and Nuclear Signaling research. Human Cripto-1 (CR-1), also known as Teratocarcinoma-derived growth factor 1 (TDGF1), is a member of the epidermal growth factor (EGF)-GFC family and has been implicated in both embryogenesis and carcinogenesis. During early vertebrate development, CR-1 functions as a co-receptor for Nodal, a transforming growth factor b (TGFb) family member, and is essential for mesoderm and endoderm formation and anterior-posterior and left-right axis establishment. In adult tissues, CR-1 is expressed at a low level in all stages of mammary gland development, and expression increases during pregnancy and lactation. Over-expression of CR-1 in mouse mammary epithelial cells leads to their transformation in vitro, and when injected in mammary glands, CR-1 produces ductal hyperplasias.
Synonyms:	rabbit anti-Cripto 1 antibody, rabbit anti-Cripto-1 antibody, Cripto 1 growth factor antibody, Epidermal growth factor like cripto protein CR1 antibody, TDGF 1 antibody, Teratocarcinoma-derived growth factor 1, CRGF, TDGF1
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	TDGF1
Reactivity:	Human, Mouse

Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal sequence of human Cripto-1 protein.
Purity/Specificity:	This product was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody is specific for human Cripto-1 protein. A BLAST analysis was used to suggest limited cross-reactivity with Cripto-1 from mouse based on a 70% homology with the immunizing sequence. Expect cross-reactivity with human Cripto-3 (TDGF2) based on very high levels of sequence conservation. Cross-reactivity with Cripto-1 from other sources has not been determined.
Relevant Links:	• UniProtKB - P13385 • NCBI - 4507425 • GeneID - 6997

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	IHC (Based on references)
Application Note:	This affinity purified antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 21 kDa in size corresponding to Cripto-1 by western blotting in the appropriate cell lysate or extract. Cripto-1 is reported as a 188 amino acid protein with a molecular weight of 21.1 kDa.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:105,000
IHC:	User Optimized
WB:	1:1000

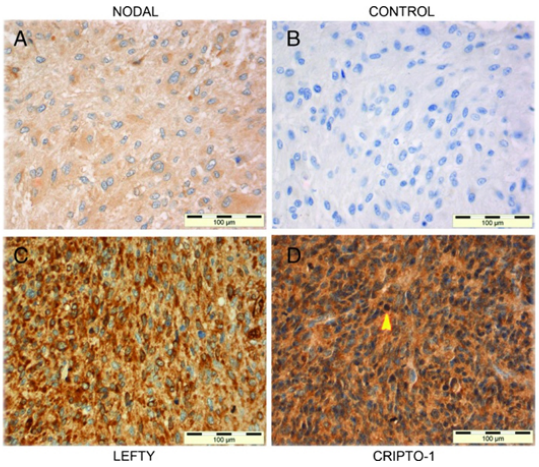
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.97 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

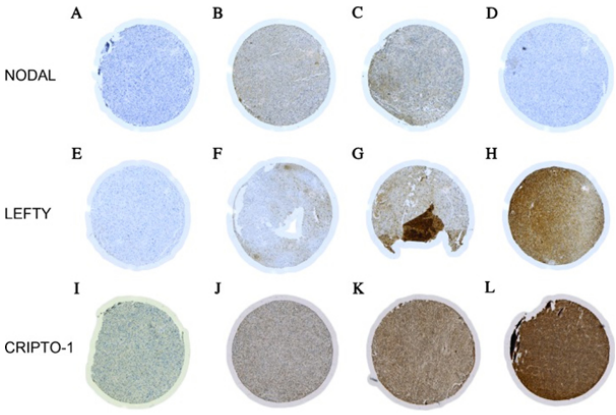
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

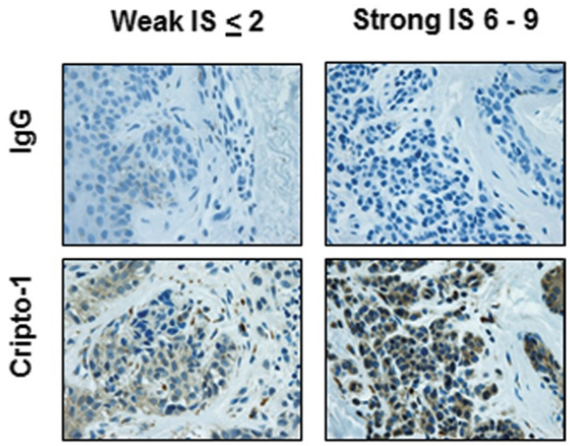
Images



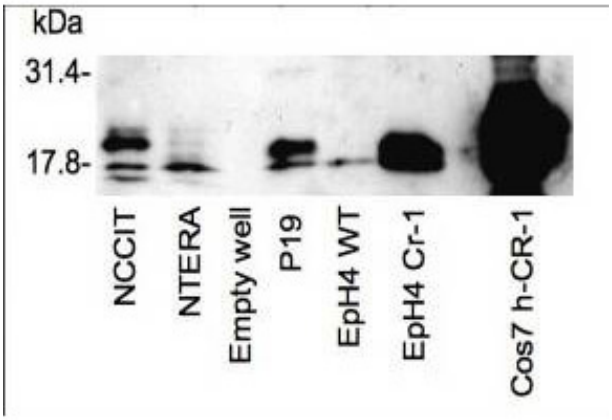
Immunohistochemistry
Examples of immunostaining showing moderate (2) Nodal intensity staining (A) and strong (3) Lefty (C) and Cripto-1 (D) staining and a negative control IgG (B) in human glioblastoma biopsy sections. The arrowhead points to a mitotic cell in the specimen stained for Cripto-1. Fig 2. PMID: 24466376



Immunohistochemistry
Different degrees of protein expression of Nodal, Lefty, and Cripto-1 in human glioblastomas. Nodal: scores 0 (A), 1 (B), and 2 (C). Negative control IgG (D). Lefty: scores 0 (E), 1 (F), 2 (G), and 3 (H). Cripto-1: scores 0 (I), 1 (J), 2 (K), and 3 (L). Fig 3. PMID: 24466376



Immunohistochemistry
Immunohistochemistry results. Representative images of immunohistochemistry staining results showing weak and strong staining for Cripto-1 in nevi. IS, index score. Fig 1.
PMID: 27446436



Western Blot
Western blot using Rockland's affinity purified anti-Cripto-1 antibody shows detection of endogenous and transfected Cripto-1 from mouse and human sources. The Cripto-1 band appears above the 17.8 kDa marker. Endogenous detection is shown using mouse P19 embryonal carcinoma cells and human NCCIT testicular embryonal carcinoma cells. EpH4 CR-1 is a mouse mammary epithelial cell line stably expressing mouse Cripto-1. NTERA cells are human embryonal carcinoma cells that, when overgrown, differentiate and lose Cripto-1 expression. COS7 cells transfected with human Cripto-1 expression vector were used as a positive control and EpH4 WT cells were used as a negative control. A non-specific band at 45kDa may be present in some preparations. The primary antibody was used at a 1:500 dilution. Personal communication, C. Bianco, NCI, Bethesda, MD

References

- Gudbergsson JM et al. An evaluation of different Cripto-1 antibodies and their variable results. *J Cell Biochem.* (2020)
- Strizzi et al. Translational significance of Nodal, Cripto-1 and Notch4 in adult nevi. *Oncology Letters* (2016)
- Ligtenberg et al. Cripto-1 vaccination elicits protective immunity against metastatic melanoma. *OncoImmunology* (2016)
- Tysnes BB et al. Age-dependent association between protein expression of the embryonic stem cell marker Cripto-1 and survival of glioblastoma patients. *Transl Oncol.* (2013)
- Malchenko S et al. Cancer hallmarks in induced pluripotent cells: new insights. *J Cell Physiol.* (2010)

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