Order online now!

www.rockland.com
tech@rockland.com
+1 484.791.3823

Datasheet for 600-401-997S

Cripto-1 TDGF1 Antibody

Overview

Description:	Anti-Cripto-1 (TDGF1) (RABBIT) Antibody - 600-401-997S
Item No.:	600-401-997S
Size:	25 µL
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:	1:50,000 - 1:150,000
IHC:	User Optimized
WB:	1:500 - 1:2,000

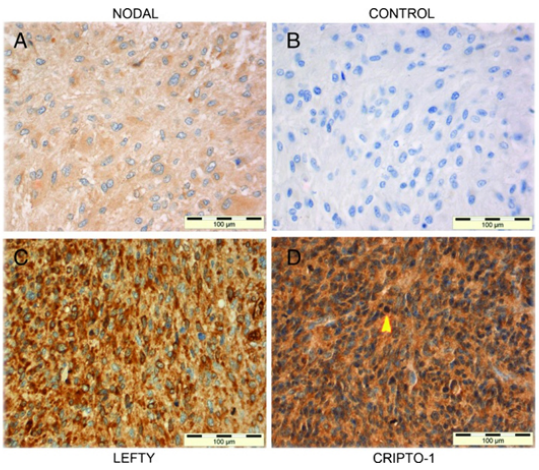
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.80 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

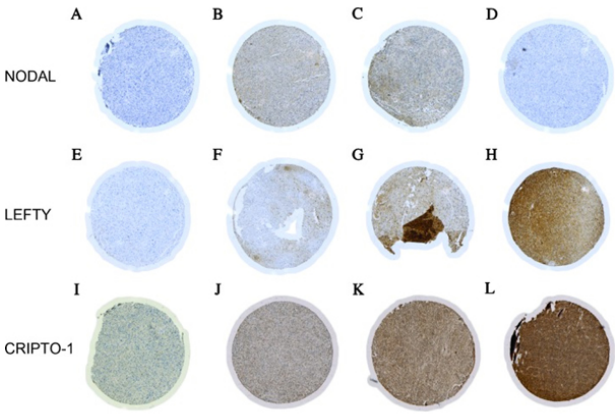
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is three (3) months from date of receipt.

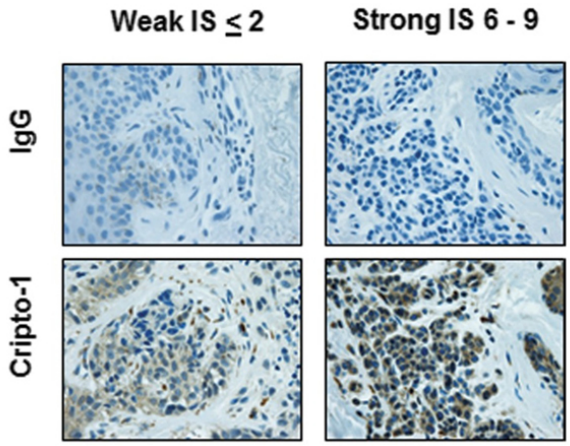
Images



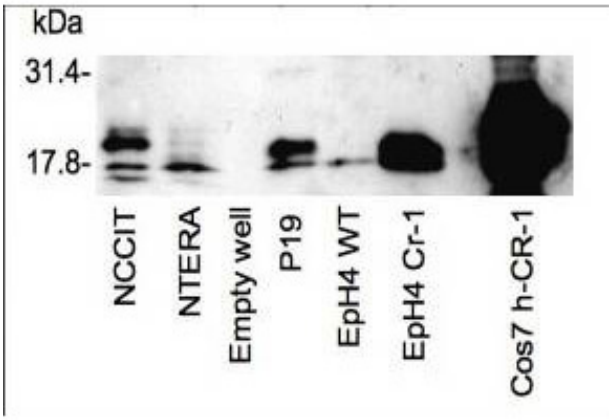
Immunohistochemistry
Examples of immunostaining showing moderate (2) Nodal intensity staining (A) and strong (3) Lefty (C) and Cripto-1 (D) staining and a negative control IgG (B) in human glioblastoma biopsy sections. The arrowhead points to a mitotic cell in the specimen stained for Cripto-1. Fig 2.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

www.rockland.com
tech@rockland.com
+1 484.791.3823

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.