

# Product Datasheet

## ROMO1 Antibody (OTI2C12) NBP2-45607

Unit Size: 0.1 ml

Store at -20C. Avoid freeze-thaw cycles.

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**NBP2-45607**

ROMO1 Antibody (OTI2C12)

Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	OTI2C12
Preservative	0.02% Sodium Azide
Isotype	IgG1
Purity	Immunogen affinity purified
Buffer	PBS (pH 7.3), 1.0% BSA and 50% Glycerol
Target Molecular Weight	8 kDa

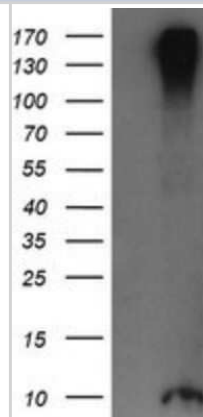
Product Description	
Description	Novus Biologicals Mouse ROMO1 Antibody (OTI2C12) (NBP2-45607) is a monoclonal antibody validated for use in IHC, WB and ICC/IF. Anti-ROMO1 Antibody: Cited in 2 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	140823
Gene Symbol	ROMO1
Species	Human, Mouse, Rat
Reactivity Notes	Use in Mouse reported in scientific literature (PMID:31945745). Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Mouse-On-Mouse blocking reagent may be needed for IHC and ICC experiments to reduce high background signal. You can find these reagents under catalog numbers PK-2200-NB and MP-2400-NB. Please contact Technical Support if you have any questions.
Immunogen	Full length human recombinant protein of human ROMO1(NP_542786) produced in HEK293T cell.

Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/Immunofluorescence, Immunohistochemistry
Recommended Dilutions	Western Blot 1:2000, Immunohistochemistry 1:150, Immunocytochemistry/Immunofluorescence 1:100, Immunohistochemistry-Paraffin

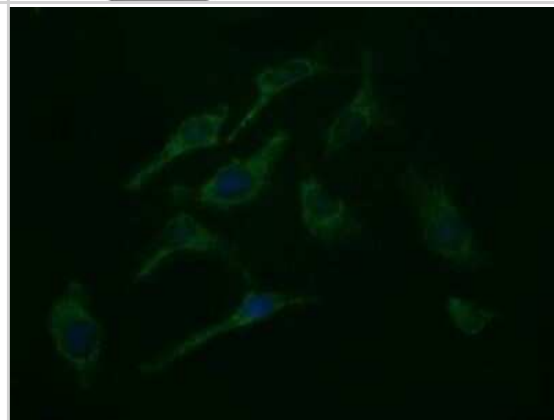


## Images

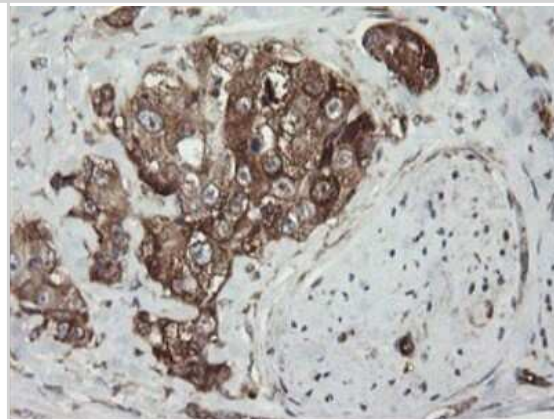
Western Blot: ROMO1 Antibody (OTI2C12) [NBP2-45607] - Analysis of HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY ROMO1.



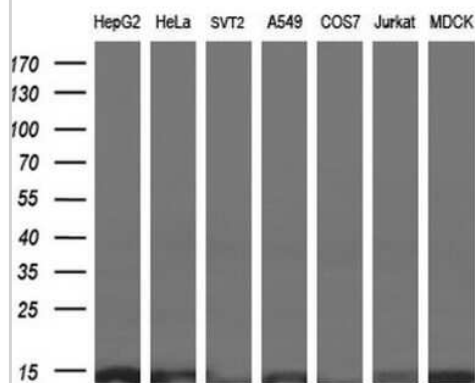
Immunocytochemistry/Immunofluorescence: ROMO1 Antibody (OTI2C12) [NBP2-45607] - Analysis of HeLa cells.



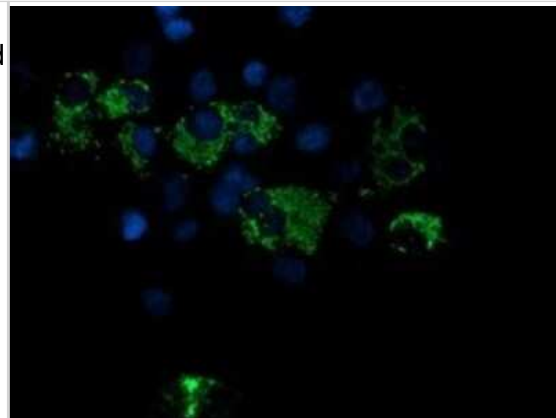
Immunohistochemistry: ROMO1 Antibody (OTI2C12) [NBP2-45607] - Analysis of Adenocarcinoma of Human breast tissue.



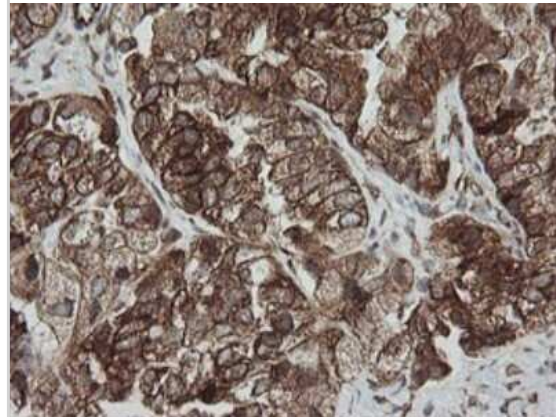
Western Blot: ROMO1 Antibody (OTI2C12) [NBP2-45607] - Analysis of extracts (10ug) from 7 different cell lines.



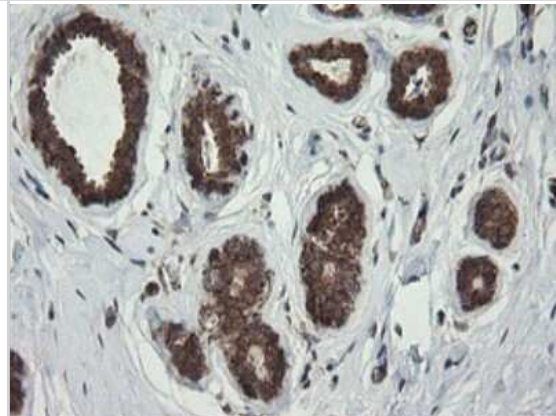
Immunocytochemistry/Immunofluorescence: ROMO1 Antibody (OTI2C12) [NBP2-45607] - Analysis of COS7 cells transiently transfected by pCMV6-ENTRY ROMO1.



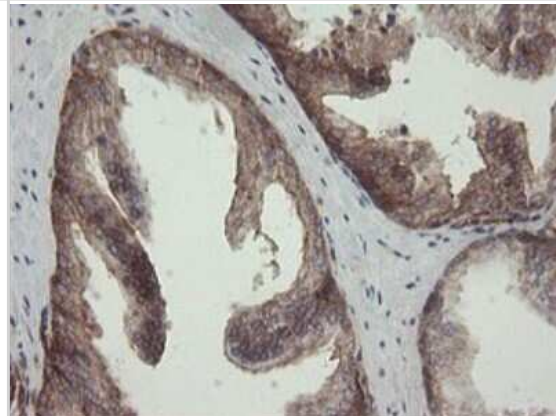
Immunohistochemistry: ROMO1 Antibody (OTI2C12) [NBP2-45607] - Analysis of Adenocarcinoma of Human ovary tissue.



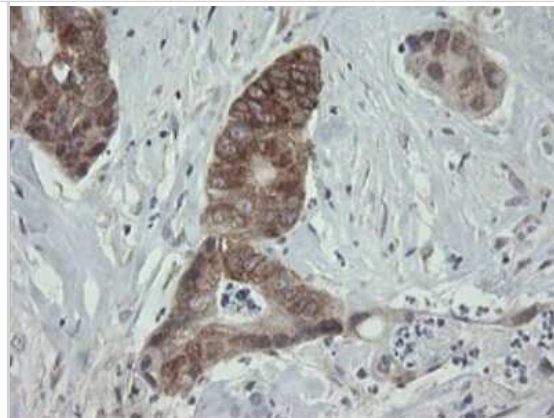
Immunohistochemistry: ROMO1 Antibody (OTI2C12) [NBP2-45607] - Analysis of Human breast tissue.



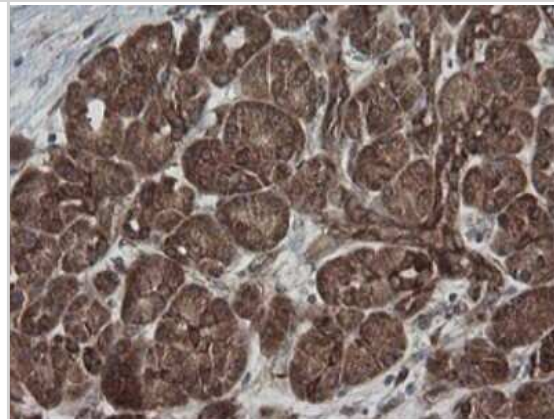
Immunohistochemistry: ROMO1 Antibody (OTI2C12) [NBP2-45607] - Analysis of Human prostate tissue.



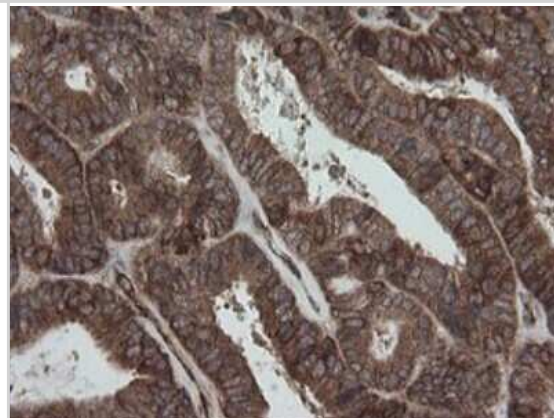
Immunohistochemistry: ROMO1 Antibody (OTI2C12) [NBP2-45607] - Analysis of Adenocarcinoma of Human colon tissue.



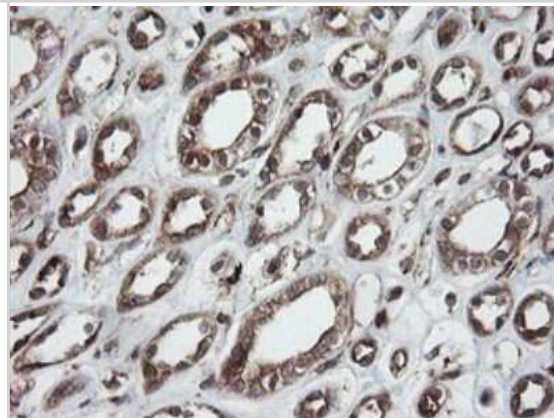
Immunohistochemistry: ROMO1 Antibody (OTI2C12) [NBP2-45607] - Analysis of Human pancreas tissue.



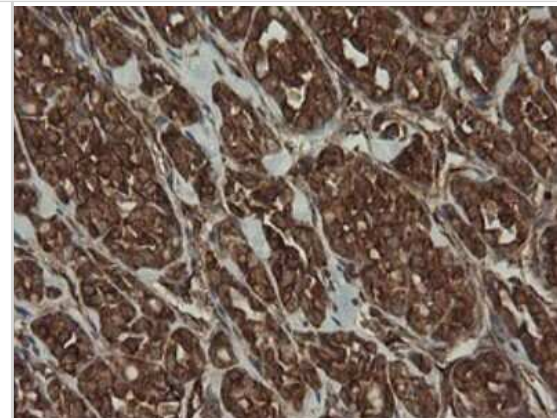
Immunohistochemistry: ROMO1 Antibody (OTI2C12) [NBP2-45607] - Analysis of Adenocarcinoma of Human endometrium tissue.



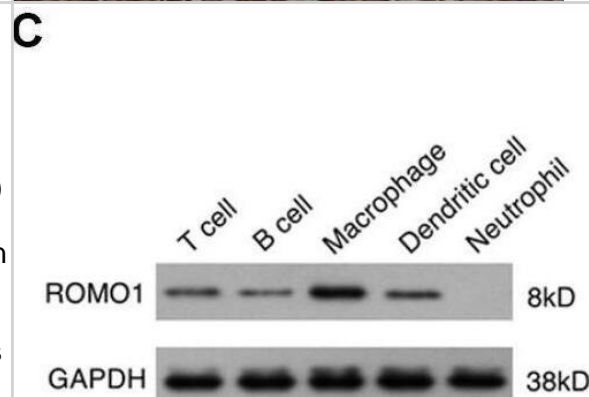
Immunohistochemistry: ROMO1 Antibody (OTI2C12) [NBP2-45607] - Analysis of Human Kidney tissue.



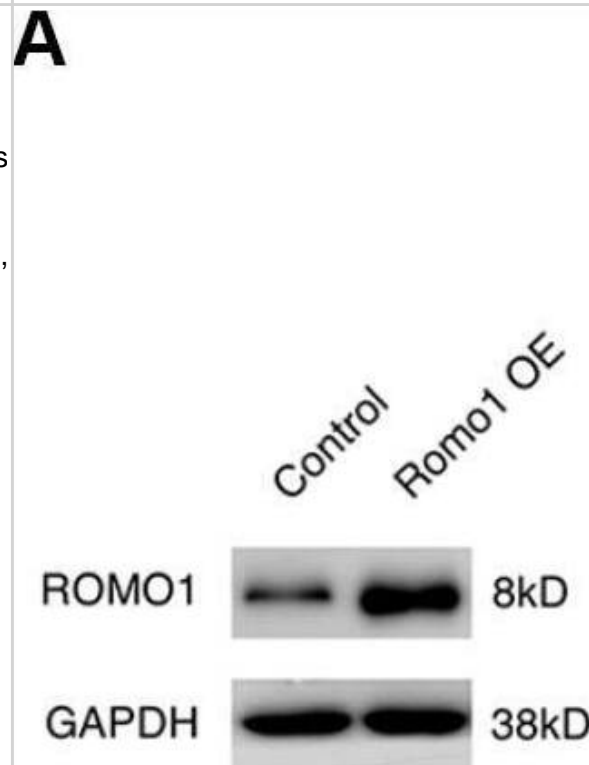
Immunohistochemistry: ROMO1 Antibody (OTI2C12) [NBP2-45607] - Analysis of Carcinoma of Human thyroid tissue.



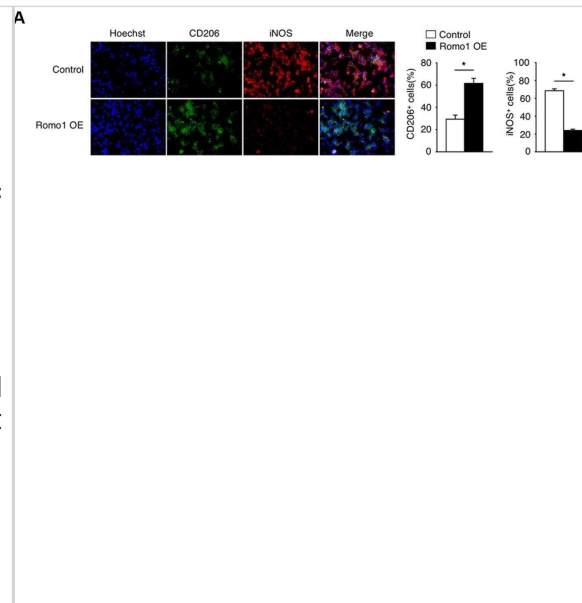
The high expression of Romo1 is associated with the poor prognosis of glioblastoma patients. (A) The mRNA levels of Romo1 in the tumor tissues of glioblastoma patients (n=156) and the healthy brain tissues (n=5) were compared. The mRNA levels were compared between the samples with RNA-Seq data published in TCGA database. (B) The survival curves of the glioblastoma patients with high expression (n=127) and low expression (n=384) of Romo1. The mRNA levels were compared between the samples with mRNA microarray data published in TCGA database. (C) The protein levels of Romo1 in different types of patient-derived immune cells were detected by western blotting. (D) The mRNA levels of Romo1 in different types of patient-derived immune cells were analyzed by RT-qPCR. (E) The tissue sections of the paratumors and tumors from glioblastoma patients were analyzed by immunofluorescence with DAPI, Romo1 and CD11b antibodies. The CD11b positive cells and the Romo1 positive cells were quantified and statistically analyzed from three independent experiments. \*, P < 0.05; \*\*, P < 0.01. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/31945745>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



The overexpression of Romo1 in bone marrow cells dampened the immune response in glioblastoma. (A) The overexpression of Romo1 in the bone marrow cells transfected with Romo1-lentivirus (the right lane) was validated by western blotting. The protein sample of the bone marrow cells transfected with control lentivirus (the left lane) was used as control. (B, C) The tumor growth curve (B) and the survival curve (C) of the mice receiving the control bone marrow allografts alone (n=6) or in combination of clodronate liposomes (200ul of each mouse every 3 days, n=6),, and the mice receiving the Romo1-overexpressed bone marrow allografts alone (n=6) in combination of in combination of clodronate liposomes (200ul of each mouse every 3 days, n=6) after orthotopic injection of GL261 cells. (D) The tumor sections were analyzed by immunohistochemistry with CD3 antibody, and the infiltrating CD3+ T cells around tumors were quantified and statistically analyzed. Arrows indicate CD3+ T cells. (E) The frequencies of IFN- $\gamma$ -producing CD4+ or CD8+ T cells in tumors of both groups were determined by flow cytometry and statistically analyzed. (F) The frequencies of GzmB-producing CD4+ or CD8+ T cells in tumors of both groups were determined by flow cytometry and statistically analyzed. (G) The tumor sections from both groups were analyzed by immunohistochemistry with Ki-67 antibody and statistically analyzed from three independent experiments. Arrows indicate the Ki-67+ cells. \*, P < 0.05; \*\*, P < 0.01. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/31945745>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



The overexpression of Romo1 promoted macrophage polarization toward M2 phenotype. (A) The control and Romo1-overexpressed macrophages were analyzed by immunofluorescence with CD206 and iNOS antibodies. The CD206+ and iNOS+ cells were quantified and statistically analyzed. (B, C) The control and Romo1-overexpressed macrophages were analyzed by flow cytometry with M1 markers (CD11c and F4/80) and M2 markers (CD206 and CD11b). The double positive cells were respectively quantified and statistically analyzed. (D) The mRNA levels of M1-related genes (IL-6, iNOS, TNF- $\alpha$ ) and M2-related genes (Arginase 1, Ym1, IL-10) were determined by RT-qPCR in control and Romo1-overexpressed macrophages. (E) The production of IL-1 $\beta$ , IL-12, TGF- $\beta$  or IL-23 was respectively analyzed by ELISA in control and Romo1-overexpressed macrophages. Data are representative of at least three independent experiments and are presented as mean  $\pm$  SD. ns, not significant; \*,  $P < 0.05$ ; \*\*,  $P < 0.01$ . Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/31945745>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Liu B, Tian y, Li y et al. ACEA Attenuates Oxidative Stress by Promoting Mitophagy via CB1R/Nrf1/PINK1 Pathway after Subarachnoid Hemorrhage in Rats Oxidative Medicine and Cellular Longevity 2022-02-24 [PMID: 35251464] (WB, Rat)

Sun G, Cao Y, Qian C et Al. Romo1 is involved in the immune response of glioblastoma by regulating the function of macrophages Aging (Albany NY) 2020-01-16 [PMID: 31945745] (WB, ICC/IF, Mouse)



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### **Products Related to NBP2-45607**

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NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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