

**Mouse Anti- ROS [Polyclonal]: RC0297**

**Intended Use:** For Research Use Only

**Description:** ROS or ROS1, a 263914 Da cell membrane tyrosine kinase expressed in brain, and an orphan receptor tyrosine kinase of the insulin receptor family, was initially identified as a homolog of v-ros from the UR2 sarcoma virus. ROS consists of a large extracellular domain that is composed of six fibronectin repeats, a transmembrane domain, and an intracellular kinase domain. While the function of ROS is undefined, it has been shown to play an important role in differentiation of epididymal epithel. The first oncogenic fusion of ROS, FIG-ROS1, was initially identified by research studies in glioblast, and subsequent studies have found this fusion in cholangiocarcinoma, ovarian can and non-small cell lung cancer (NSCLC). Investigators have found additional oncogenic ROS fusion proteins in NSCLC (at a frequency of ~1.6%), where the ROS1 kinase domain is fused to the amino-terminal region of a number of different proteins, including CD74 and SLC34A. ROS fusion proteins activate the SHP-2 phosphatase, PI3K/Akt/mTOR, Erk, and Stat3 pathwa. This antibody recognizes endogenous levels of total ROS protein. It does not cross-react with other related proteins when analyzed by western blot. Please note that staining may be observed in ROS rearranged lung carcinomas, macrophages/giant cells, reactive type II pneumocyte hyperplasia, and the epithelium in areas of bronchiolar metaplasia. Staining of unknown specificity has been observed in cholangiocarcinoma, hepatocellular carcinoma (HCC), and kidney tissues.

**Specifications**

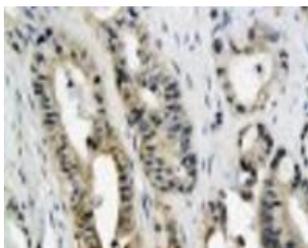
Clone: Polyclonal  
 Source: Rabbit  
 Isotype: IgG  
 Reactivity: Human, mouse, rat  
 Localization: Membrane  
 Formulation: In 10 mM PBS pH 7.4, 1% BSA, 0.02% sodium azide (NaN3)  
 Storage: Store at 2°- 8°C. For longer periods of storage, store at -20°C. Avoid repeat freeze-thaw cycles  
 Applications: IHC, ELISA (P), ICC, IF, WB  
 Package:

Description	Catalog No.	Size
ROS Polyclonal Concentrated	RC0297	100ug/1 ml

**IHC Procedure\***

Positive Control Tissue: HCC, lung carcinoma  
 Concentrated Dilution: 25-100  
 Pretreatment: EDTA pH 8.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C  
 Incubation Time and Temp: 30-60 minutes @ RT  
 Detection: Refer to the detection system manual

\* Result should be confirmed by an established diagnostic procedure.



Human colon carcinoma FFPE tissue stained with anti-ROS using DAB

**References:**

1. CD74-ROS1 fusion transcripts in resected non-small cell lung carcinoma. Matsuura S., et al. Oncol Rep. Oct;30(4):1675-80, 2013.
2. Analysis of receptor tyrosine kinase ROS1-positive tumors in non-small cell lung cancer: identification of a FIG-ROS1 fusion. Rimkunas VM., et al. Clin Cancer Res. Aug 15;18(16):4449-57, 2012.
3. Epigenetic regulation of c-ROS receptor tyrosine kinase expression in malignant gliomas. Jun HJ, et al. Cancer Res. Mar 15;69(6):2180-4, 2009.

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