

BACKGROUND

The transmembrane tyrosine kinase Ros, encoded by the protooncogene *c-ros*, is an "orphan" receptor with exclusive expression in specific epithelial cell types, including those of the epididymis. The first discovered oncogenic variants of *c-ros* were found to encode proteins with truncated extracellular domain, and they were detected in a chick retrovirus and in human tumor cell lines. The oncogenic potential of the Ros tyrosine kinase has also been demonstrated by ligand-dependent transformation of NIH3T3 fibroblasts, which were stably transfected with a chimeric receptor consisting of the TrkA/nerve growth factor (NGF) receptor extracellular domain and the Ros transmembrane and cytoplasmic domains.¹ In addition, Ros can be activated by translocation to form fusion with other proteins in some tumors. It was demonstrated that FIG-ROS-mediated tumor formation *in vivo* parallels the activation of the tyrosine phosphatase SH2 domain-containing phosphatase-2 (SHP-2) and a phosphatidylinositol 3-kinase/Akt/mammalian target of rapamycin signaling axis in tumors and tumor-derived cell lines.² The physiological function of Ros has been characterized in mice with a targeted mutation of *c-ros*. Male Ros^{-/-} mice exhibit defects in differentiation and regionalization of the epididymal epithelium and, because of this defect, are sterile.³

References:

1. Riethmacher D et al.: Oncogene 9:3617-26, 1999.
2. Charest A et al.: Cancer Res. 66:7473-81, 2006.
3. Yeung CH et al.: J. Reprod. Fertil. Suppl. 53:137-47, 1998.

TECHNICAL INFORMATION

Source:

Ros antibody is a rabbit polyclonal antibody raised against an epitope near the human Ros carboxyl terminal sequence.

Specificity and Sensitivity:

This affinity purified antibody detects endogenous levels of Ros proteins in various cell lysates.

Storage Buffer: PBS and 30% glycerol

Storage:

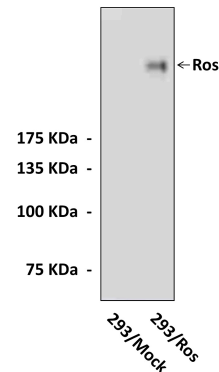
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC (Paraffin)	n/d
ICC	n/d
FACS	n/d

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA



HEK293 cells were transfected with human Ros expression constructs and the cell lysates were subjected to Western Blot analysis using Ros Antibody.

