

# Phospho-Shc (Tyr317) Antibody



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**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W	<b>Reactivity:</b> H M	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 50, 55, 70	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #P29353	<b>Entrez-Gene Id:</b> 6464
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## Product Usage Information

### Application

Western Blotting

### Dilution

1:1000

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

## Specificity/Sensitivity

Phospho-Shc (Tyr317) Antibody detects Shc only when phosphorylated at Tyr317.

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr317 of human Shc. Antibodies are purified by protein A and peptide affinity chromatography.

## Background

SHC-transforming protein 1 (SHC1) is an adaptor protein to targets of activated tyrosine kinases. SHC1 is ubiquitously expressed and the gene is expressed in 2 transcripts, resulting in 3 isoforms with distinct functions and subcellular locations (1). The phosphorylated p46 and p52 isoforms couple activated receptor tyrosine kinases to Ras via the recruitment of the GRB2/SOS complex. The third isoform, p66, acts as a downstream target of the tumor suppressor p53 and is thereby implicated in oxidative stress response, tumor progression, and cancer cell proliferation (2,3). SHC1 has been identified to have prognostic and diagnostic value in multiple cancers, making it a potential biomarker (4).

## Background References

1. Terada, L.S. (2019) *Small GTPases* 10, 64-71.
2. Audero, E. et al. (2004) *J Biol Chem* 279, 13224-33.
3. Lebiezinska-Arciszewska, M. et al. (2015) *Eur J Clin Invest* 45 Suppl 1, 25-31.
4. Chen, J. et al. (2022) *Front Genet* 13, 817118.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**W:** Western Blotting

## Cross-Reactivity Key

**H:** Human **M:** Mouse

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