## **Technical Data Sheet**

# Purified Mouse Anti-SHC

## **Product Information**

Material Number:	610878			
Size:	50 µg			
Concentration:	250 μg/ml			
Clone:	30/SHC			
Immunogen:	Human SHC aa. 359-473			
Isotype:	Mouse IgG1			
Reactivity:	QC Testing: Human			
	Tested in Development: Mouse, Rat, Dog, Chicken			
Target MW:	66, 52 & 46 kDa			
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium			
	azide.			

## Description

The mammalian SHC proteins, which are expressed as multiple isoforms (46, 52, and 66 kDa), each contain a C-terminal SH2 domain and an N-terminal glycine/proline rich sequence. These proteins function as early signaling intermediates (also called adaptor proteins) which relay G protein coupled receptor (GPCR) and receptor tyrosine kinase (RTK)-induced signals via the Ras transduction pathway. To this end, the SHC proteins contain specific tyrosine residues which are phosphorylated following association with the active RTKs. Phosphorylated SHC forms a complex with the adaptor protein GRB2. Association of the SHC-GRB2 complex with the Ras guanine nucleotide exchange factor (Ras-GEF) mediates the localization of Ras-GEF to the plasma membrane. Once at the plasma membrane, Ras-GEF activates Ras by catalyzing the Ras-GTP for Ras-GDP exchange. Over-expression of SHC results in cell transformation, and phosphorylation of SHC correlates with activation of the ERK1/ERK2 kinases. The SHC proteins are mediators of signals that are essential for cell metabolism, growth, and differentiation.





Western blot analysis of SHC on a HeLa cell lysate (Human cervical epitheloid carcinoma; ATCC CCL-2.2). Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of the Mouse Anti-SHC antibody.

#### Immunofluorescence staining of WI-38 cells (Human lung fibroblasts; ATCC CCL-75).

#### Preparation and Storage Store undiluted at -20°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

#### **Application Notes**

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

#### **Recommended Assay Procedure:**

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western\_Blotting.shtml

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#### Suggested Companion Products

Catalog Number	Name	Size	Clone
611449	HeLa Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

#### **Product Notices**

- 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- Source of all serum proteins is from USDA inspected abattoirs located in the United States. 2.
- 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

#### References

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Kiely PA, Sant A, O'Connor R. RACK1 is an insulin-like growth factor 1 (IGF-1) receptor-interacting protein that can regulate IGF-1-mediated Akt activation and protection from cell death. J Biol Chem. 2002; 277(25):22581-22589. (Biology: Immunoprecipitation, Western blot)

Laser M, Willey CD, Jiang W. Integrin activation and focal complex formation in cardiac hypertrophy. J Cell Biol. 2000; 275(45):35624-35630. (Biology: Western blot)

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