Catalog No. LF-MA0201

MONOCLONAL ANTIBODY

Anti- Shc 1 (47F4)

Background : Shc is a prototype adapter protein that is expressed from the earliest stages of T-cell development. Shc becomes rapidly tyrosine phosphorylated after T-cell receptor (TCR) engagement.

Three *shc* genes have been identified in mammals and their gene products have been referred to as ShcA, ShcB and ShcC. ShcA is ubiquitously expressed, while shcB and ShcC expression appear limited to neuronal cells. ShcA is expressed as three isoforms of about 46, 52 and 66 kDa.

Shc is composed of an N-terminal PTB, a central collagen-homology (CH) domain and a C-terminal SH2 domain. The 66 kDa isoform of ShcA is expressed in most cells except in the hematopoietic lineage and contains an additional amino-terminal CH-like region.

The tyrosine phosphorylation of Shc has been noticed upon engagement of numerous cell surface receptors such as growth factor receptors, antigen receptors, cytokine receptors, G-protein coupled receptors and hormone receptors. The involvement of ShcA in the Ras signaling pathway is initiated by the tyrosine-phosphorylation of the receptor protein tyrosine kinases (RPTKs) and subsequent interaction with Grb2 and Ras guanine nucleotide exchange factor, Sos. The Shc : Grb2 : Sos complex gets localized to the membrane through the interaction of Shc with the phosphorylated receptor. Membrane-bound Sos then activates Ras by catalysing GDP/GTD exchange. GTP-bound Ras then triggers downstream events, which include Raf, the mitogen-activated protein kinases (MAPKs) and MAPK kinase (MEK).

Immunogen : Recombinant human protein purified from *E.coli* (His/ABD-Shc1)

Clone number : 47F4 **Host :** Mouse

Size : 100 µℓ **Isotype :** IgG1, k

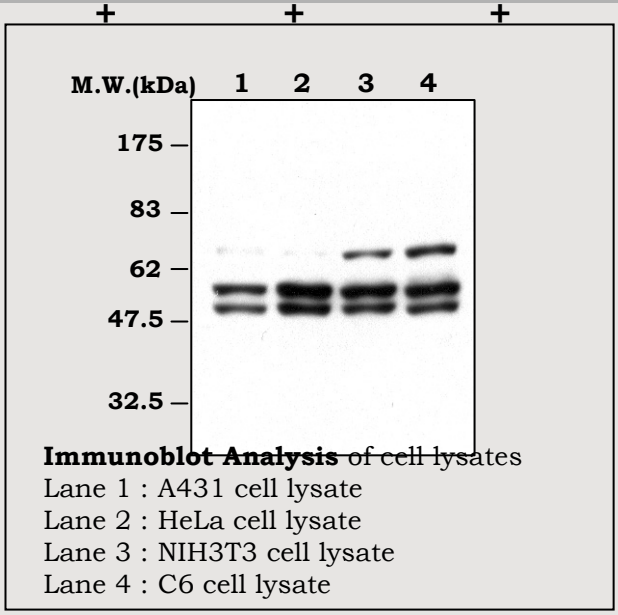
Compositon : Hepes with 0.15M NaCl, 0.01% BSA, 0.03% sodium azide, and 50% glycerol

Positive control : HeLa cell lysate

Storage : Store for 1 year at –20℃ from date of shipment

Species cross reactivity

Human	Mouse	Rat
+	+	+



Immunoblot Analysis of cell lysates
Lane 1 : A431 cell lysate
Lane 2 : HeLa cell lysate
Lane 3 : NIH3T3 cell lysate
Lane 4 : C6 cell lysate

Applications :
ELISA
Western blotting (1: 5,000)
Immunoprecipitation (1 µℓ/400 µℓ cell lysates)

Background Reference :

1)Zhang L, Lorenz U and Ravichandran KS., 2003, Immunol Rev. 191:183-95

2)Ravichandran KS., 2001, Oncogene. 20(44):6322-30

3)Cattaneo E and Pelicci PG., 1998, Trends Neurosci. 21(11):476-81

Gentaur Molecular Products
Voortstraat 49
1910 Kampenhout, Belgium
http://www.gentaur-worldwide.com