

## Product datasheet for TP510304

### Sh2b1 (BC051978) Mouse Recombinant Protein

#### Product data:

<b>Product Type:</b>	Recombinant Proteins
<b>Description:</b>	Purified recombinant protein of Mouse SH2B adaptor protein 1 (cDNA clone MGC:62271 IMAGE:6401205), complete cds, with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug
<b>Species:</b>	Mouse
<b>Expression Host:</b>	HEK293T
<b>Expression cDNA Clone or AA Sequence:</b>	>MR210304 protein sequence <b>Red</b> =Cloning site <b>Green</b> =Tags(s)
	MNGAPSPEDGVFPSPPALPPPPPPSWQEFCESHARAAALDLARRFRLYLASHPQYAEPGAEAAFSGRFAE LFLQHFEAEVARASGSLSPVLAPLSPGVEIPPSHDLSLESCRVGGPLAVLGPSSSEDLAGLPSSVPS STTSSKPKLKKRFSLSVGRSVRGSVRGILQWRGAVDSPSQAGPLETTSGPPVLGGNSNSNSSGGAGTVG RALANDGTSPGERWTHRFRERLRLSRGGTLKDGAGMIQRELLSFMGAEAAAPDPAGVGRGGGAAGLTSG GGGQPQWQKCRLLLSEGESEGGGSRLEFFVPPKASRPRLSIPCSITITDVRTATALEMPDRENTFVVKVEG PSEYILETSDALHVKAWVSDIQECLSPGPCPAISPRPMTLPLAPGTSFFTKDNTDSLELPCLNHSESLPS QDLLLGPSESNDRLSQGAYGGLSDRPSASFSPSSASIAASHFDSMELLPELPPRIPIEGPPAGTVHPL STPYPLDTPEAATGSFLFQGESEGGEGDQPLSGYPWFHGMLSRKAAQLVLEGGTGSHGVFLVRQSETR RGEYVLTFFNFQKAKHLRLSLNEEGQCRVQHLWFQSFIDMLEHFRVHPIPLESGGSSDVLVSYVPSQRQ QGEQSR SAGEEVPVHPRSENGAPPVTQPSPLNPLHGQIPHILGQKRRRGRQKLRQPQPQPKRGKRKRKR AVEGSRKSWSPWLSWSPWLNWKRK  <b>TRTRPLEQKLISEEDLAANDILDYKDDDDKV</b>
<b>Tag:</b>	C-MYC/DDK
<b>Predicted MW:</b>	77.6 kDa
<b>Concentration:</b>	>0.05 µg/µL as determined by microplate BCA method
<b>Purity:</b>	> 80% as determined by SDS-PAGE and Coomassie blue staining
<b>Buffer:</b>	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
<b>Note:</b>	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
<b>Storage:</b>	Store at -80°C after receiving vials.



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<b>Stability:</b>	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
<b>Locus ID:</b>	20399
<b>UniProt ID:</b>	<a href="#">Q91ZM2</a>
<b>RefSeq Size:</b>	2902
<b>Cytogenetics:</b>	7 69.06 cM
<b>RefSeq ORF:</b>	2172
<b>Synonyms:</b>	SH2-Bb, SH2-B, mKIAA1299
<b>Summary:</b>	<p>Adapter protein for several members of the tyrosine kinase receptor family. Involved in multiple signaling pathways mediated by Janus kinase (JAK) and receptor tyrosine kinases, including the receptors of insulin (INS), insulin-like growth factor I (IGF1), nerve growth factor (NGF), brain-derived neurotrophic factor (BDNF), glial cell line-derived neurotrophic factor (GDNF), platelet-derived growth factor (PDGF) and fibroblast growth factors (FGFs). In growth hormone (GH) signaling, autophosphorylated ('Tyr-813') JAK2 recruits SH2B1, which in turn is phosphorylated by JAK2 on tyrosine residues. These phosphotyrosines form potential binding sites for other signaling proteins. GH also promotes serine/threonine phosphorylation of SH2B1 and these phosphorylated residues may serve to recruit other proteins to the GHR-JAK2-SH2B1 complexes, such as RAC1. In leptin (LEP) signaling, binds to and potentiates the activation of JAK2 by globally enhancing downstream pathways. In response to leptin, binds simultaneously to both, JAK2 and IRS1 or IRS2, thus mediating formation of a complex of JAK2, SH2B1 and IRS1 or IRS2. Mediates tyrosine phosphorylation of IRS1 and IRS2, resulting in activation of the PI 3-kinase pathway. Acts as positive regulator of NGF-mediated activation of the Akt/Forkhead pathway; prolongs NGF-induced phosphorylation of AKT1 on 'Ser-473' and AKT1 enzymatic activity. Enhances the kinase activity of the cytokine receptor-associated tyrosine kinase JAK2 and of other receptor tyrosine kinases, such as FGFR3 and NTRK1. For JAK2, the mechanism seems to involve dimerization of both, SH2B1 and JAK2. Enhances RET phosphorylation and kinase activity (By similarity). Isoforms seem to be differentially involved in IGF-I and PDGF-induced mitogenesis, according the order: isoform 3 &gt; isoform 4 &gt; isoform 1 &gt; isoform 2.[UniProtKB/Swiss-Prot Function]</p>