10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

SH2B1 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP16002b

Specification

SH2B1 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q9NRF2

SH2B1 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 25970

Other Names
SH2B adapter protein 1, Pro-rich, PH and SH2 domain-containing signaling mediator, PSM, SH2 domain-containing protein 1B, SH2B1, KIAA1299, SH2B

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SH2B1 Antibody (C-term) Blocking Peptide - Protein Information

Name SH2B1

Synonyms KIAA1299, SH2B

Function
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 a 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. Isoforms seem to be differentially involved in IGF-I and PDGF-induced mitogenesis (By similarity).

Cellular Location
Cytoplasm. Membrane. Nucleus. Note=Shuttles between the nucleus and the cytoplasm.

Tissue Location
Widely expressed with highest levels in skeletal muscle and ovary.

SH2B1 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

SH2B1 Antibody (C-term) Blocking Peptide - Images

SH2B1 Antibody (C-term) Blocking Peptide - Background

This gene encodes a member of the SH2-domain containingmediators family. The encoded protein mediates activation ofvarious kinases and may function in cytokine and growth factorreceptor signaling and cellular transformation. Alternativelyspliced transcript variants have been described. [provided byRefSeq].

SH2B1 Antibody (C-term) Blocking Peptide - References

Fontaine-Bisson, B., et al. Diabetologia 53(10):2155-2162(2010)Holzapfel, C., et al. Int J Obes (Lond) 34(10):1538-1545(2010)Shi, J., et al. Am. J. Epidemiol. 172(3):244-254(2010)Haupt, A., et al. Obesity (Silver Spring) 18(6):1212-1217(2010)Ng, M.C., et al. J. Clin. Endocrinol. Metab. 95(5):2418-2425(2010)