Revision 1

Phospho-Ack1 (Tyr857/858) Antibody

#3137 Store at -20C

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M	Transfected Only	135	Rabbit	#Q07912	10188

Product Usage Information

Application	Dilution
Western Blotting	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-Ack1 (Tyr857/858) Antibody detects overexpressed levels of Ack1 only when phosphorylated at Tyr857/858. This antibody does not cross-react with other tyrosine-phosphorylated tyrosine kinases.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr857/858 of human Ack1. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Ack1 and Ack2 (activated cdc42-associated kinase 1 and 2) are non-receptor tyrosine kinases that consist of a tyrosine kinase core, an SH3 domain, a cdc42/Rac-binding (CRIB) domain, a Ralt homology region and a proline-rich region (1,2). Ack1 and 2 are the only two tyrosine kinases known to interact with cdc42. Both Acks are activated by growth factors including EGF and PDGF, as well as by activated integrins through cell adhesion, and may serve to link receptor tyrosine kinase or G protein-coupled receptor signaling with cdc42. Acks may regulate cell growth, morphology and motility (3,4). Recent findings indicate that Ack1 may play a role in prostate tumorigenesis, making it a potential drug target for this type of cancer (5).
Phosphorylation of Ack1 on Tyr857 and Tyr858 on Ack1 was identified at Cell Signaling Technology (CST) using PhosphoScan®, CST's LC-MS/MS platform for phosphorylation site discovery as well as other publications using MS technology (5,6). Phosphorylation of Ack1 at Tyr857/858 was observed in select carcinoma cell lines and in tumors.

Background References

1. Galisteo, M.L. et al. (2006) *Proc. Natl. Acad. Sci. USA* 103, 9796-9801.
2. Yokoyama, N. and Miller, W.T. (2003) *J. Biol. Chem.* 278, 47713-47723.
3. Yang, W. and Cerione, R.A. (1997) *J. Biol. Chem.* 272, 24819-24824.
4. Yang, W. et al. (2001) *J. Biol. Chem.* 276, 43987-43993.
5. Mahajan, N.P. et al. (2005) *Cancer Res.* 65, 10514-10523.
6. Zhang, Y. et al. (2005) *Mol. Cell Proteomics* 4, 1240-1250.
7. Salomon, A.R. et al. (2003) *Proc. Natl. Acad. Sci. USA* 100, 443-448.

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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Limited Uses

force or effect.

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