Revision 6

#8714 Store at -20C

Phospho-HS1 (Tyr378/397) (D12C1) XP® Rabbit mAb

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IF-IC, FC-FP	H	Endogenous	80	Rabbit IgG	#P14317	3059

Product Usage Information

Application	Dilution
Immunofluorescence (Immunocytochemistry)	1:50
Flow Cytometry (Fixed/Permeabilized)	1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Phospho-HS1 (Tyr378/397) (D12C1) XP® Rabbit mAb recognizes endogenous levels of HS1 protein only when phosphorylated at Tyr378 or Tyr397.

Species predicted to react based on 100% sequence homology:

Mouse, Rat

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr405 of mouse HS1 protein. This site corresponds to Tyr397 of human HS1 protein.

Background

HS1 (HCLS1, LckBP1, p75) is a protein kinase substrate that is expressed only in tissues and cells of hematopoietic origin (1,2). HS1 contains four cortactin repeats and a single SH3 domain (2). This intracellular protein is phosphorylated following immune receptor activation, which promotes recruitment of HS1 to the immune synapse (3-5). Phosphorylation of HS1 is required to regulate actin dynamics and provide docking sites for many other signaling molecules, such as Vav1 and PLCγ1 (6). HS1 also plays an important role in platelet activation (7).
HS1 is rapidly phosphorylated at Tyr397 by Syk and/or Lyn kinases following immune receptor stimulation and thrombin-mediated platelet stimulation. This phosphorylation is an important step in cytoskeletal rearrangement and signaling complex formation (6-10).

Background References

1. Kitamura, D. et al. (1989) *Nucleic Acids Res* 17, 9367-79.
2. Kitamura, D. et al. (1995) *Biochem Biophys Res Commun* 208, 1137-46.
3. Suzuki, H. et al. (1997) *J Immunol* 159, 5881-8.
4. Hata, D. et al. (1994) *Immunol Lett* 40, 65-71.
5. Yamanashi, Y. et al. (1993) *Proc Natl Acad Sci USA* 90, 3631-5.
6. Gomez, T.S. et al. (2006) *Immunity* 24, 741-52.
7. Kahner, B.N. et al. (2007) *Blood* 110, 2449-56.
8. Yamanashi, Y. et al. (1997) *J Exp Med* 185, 1387-92.
9. Hao, J.J. et al. (2004) *J Biol Chem* 279, 33413-20.
10. Brunati, A.M. et al. (2005) *J Biol Chem* 280, 21029-35.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

IF-IC: Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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