Revision 1

Store at -20C

#14531

# Phospho-DDR1 (Tyr513) (E1N8F) Rabbit mAb

Cell Signaling TECHNOLOGY®

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| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---|---|---|---|---|---|---|
| W | H | Endogenous | 125 | Rabbit IgG | #Q08345 | 780 |

## 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, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

## Specificity/Sensitivity

Phospho-DDR1 (Tyr513) (E1N8F) Rabbit mAb recognizes endogenous levels of DDR1 protein only when phosphorylated at Tyr513.

## 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 Tyr513 of human DDR1 protein.

## Background

The discoidin domain receptors (DDRs) are receptor tyrosine kinases with a discoidin homology repeat in their extracellular domains, activated by binding to extracellular matrix collagens. So far, two mammalian DDRs have been identified: DDR1 and DDR2 (1). They are widely expressed in human tissues and may have roles in smooth muscle cell-mediated collagen remodeling (2). Research studies have implicated aberrant expression and signaling of DDRs in human diseases related to increased matrix degradation and remodeling, such as cardiovascular disease, liver fibrosis, and tumor invasion (1).
Phosphorylation of DDR1 on Tyr513 was identified at Cell Signaling Technology (CST) using PhosphoScan®, a CST™ LC-MS/MS platform for phosphorylation site discovery (3). Additional research looking at DDR1 activation state has identified the same phosphorylation site in DDR1 (4).

## Background References

1. Vogel, W. (1999) *FASEB J* 13 Suppl, S77-82.
2. Ferri, N. et al. (2004) *Am J Pathol* 164, 1575-85.
3. Rush, J. et al. (2005) *Nat Biotechnol* 23, 94-101.
4. Fu, H.L. et al. (2014) *J Biol Chem* 289, 9275-87.

## 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

## Trademarks and Patents

## Limited Uses

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