Revision 2

#68309 Store at -20°C

Notch Activated Targets Antibody Sampler Kit

1 Kit (8 x 20 microliters)

Cell Signaling TECHNOLOGY®

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Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Notch1 (D1E11) XP® Rabbit mAb	3608	20 µl	120, 300 kDa	Rabbit IgG
Cleaved Notch1 (Val1744) (D3B8) Rabbit mAb	4147	20 µl	110 kDa	Rabbit IgG
RBPSUH (D10A4) XP® Rabbit mAb	5313	20 µl	61 kDa	Rabbit IgG
MAML1 (D3K7B) Rabbit mAb	12166	20 µl	130 kDa	Rabbit IgG
c-Myc (D84C12) Rabbit mAb	5605	20 µl	57-65 kDa	Rabbit IgG
p21 Waf1/Cip1 (12D1) Rabbit mAb	2947	20 µl	21 kDa	Rabbit IgG
HES1 (D6P2U) Rabbit mAb	11988	20 µl	30 kDa	Rabbit IgG
Cyclin D3 (DCS22) Mouse mAb	2936	20 µl	31 kDa	Mouse IgG1
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat
Anti-mouse IgG, HRP-linked Antibody	7076	100 µl		Horse

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Notch Activated Targets Antibody Sampler Kit provides an economical means of detecting target proteins of activated Notch. The kit contains enough primary antibody to perform four western blot experiments per primary antibody.

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.

Background

Notch proteins (Notch1-4) are a family of transmembrane receptors that play important roles in development and the determination of cell fate (1). Mature Notch receptors are processed and assembled as heterodimeric proteins, with each dimer comprised of a large extracellular ligand-binding domain, a single-pass transmembrane domain, and a smaller cytoplasmic subunit (Notch intracellular domain, NICD) (2). Binding of Notch receptors to ligands of the Delta-Serrate-Lag2 (DSL) family triggers heterodimer dissociation, exposing the receptors to proteolytic cleavages; these result in release of the NICD, which translocates to the nucleus and activates transcription of downstream target genes (3,4). RBPSUH (Recombining Binding Protein, SUppressor of Hairless), is the DNA-binding component of the transcription complex regulated by canonical Notch signaling. Binding of Notch with RBPSUH activates a transcription activation complex that includes Mastermind-like (MAML) proteins, leading to transcriptional activation of Notch target genes (5-7). The NICD binds and activates c-Myc which functions as a transcriptional regulator with roles in various aspects of cell behavior including proliferation, differentiation and apoptosis (8). The tumor suppressor protein p21 Waf1/Cip1 acts as an inhibitor of cell cycle progression. The NICD-RBPSUH complex binds and activates p21 for transcription (15). HES1 (Hairy and Enhancer of Split 1) is one of seven members of the HES family of basic helix-loop-helix (bHLH) transcription factors that is particularly well known as a repressive mediator of the canonical Notch signaling pathway (10). HES1 plays a key role in mediating Notch-dependent T cell lineage commitment (11), and has been reported to be an essential mediator of Notch-induced T cell acute lymphoblastic leukemia (T-ALL) (11,12). The active complex of cyclin D/CDK4 targets the retinoblastoma protein for phosphorylation, allowing the release of E2F transcription factors that activate G1/S-phase gene expression (13). Transcription of cyclin D is in part regulated by the NICD binding to the promoter region of cyclin D (14).

Background References

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