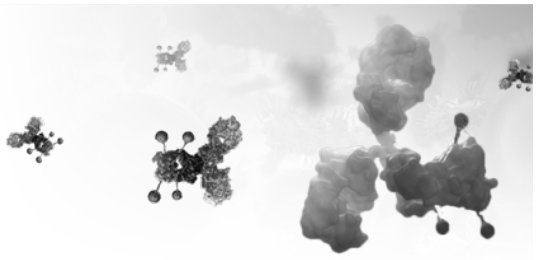

Rat Anti-HES1 monoclonal antibody, clone IT406B (CABT-RM152)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Specificity	Detects HES-1 in human and murine tissues.
Target	HES1
Immunogen	His-tagged recombinant fragment corresponding to 190 amino acids from murine HES-1 protein.
Isotype	IgG2b, κ
Source/Host	Rat
Species Reactivity	Human, Mouse
Clone	IT406B
Purification	Protein G purified
Conjugate	unconjugated
Applications	ELISA, IHC
Molecular Weight	29.75 kDa calculated.
Format	Liquid
Size	100 µl
Buffer	0.1 M Tris-Glycine (pH 7.4), 150 mM NaCl
Preservative	0.05% sodium azide

45-1 Ramsey Road, Shirley, NY 11967, USA
Email: info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221

Storage	Stable for 1 year at 2-8°C from date of receipt.

BACKGROUND

Introduction	Transcription factor HES-1 is encoded by the Hes1 gene in murine species. HES-1 is a mammalian equivalent of the Hairy and Enhancer of split proteins that acts as a transcriptional repressor of genes that require basic helix-loop-helix (bHLH) protein for their transcription. HES-1 plays a role in several physiological processes, including cell differentiation, cell cycle arrest, and apoptosis. It is expressed in high levels in undifferentiated neural precursor cells and its levels decline with neural differentiation. It also acts as a negative regulator of myogenesis by inhibiting the function of Myogenic Differentiation 1 (MYOD1) and transcription regulatory protein ASH1. HES-1 also serves as a relevant mediator of the NOTCH signaling pathway in cancer where NOTCH pathway, through HES-1, is reported to contribute to the stabilization of the epithelial phenotype of bladder cancer cells. Low levels of HES-1 correlate with more aggressive bladder cancer and associate with mesenchymal features and invasive properties. HES-1 contains two conserved domains: the bHLH (aa 34-91), Orange (aa 110-143), and a C-terminal WRPW motif (aa 275-278). The bHLH, as well as cooperation between the central Orange domain and the C-terminal WRPW (Trp-Arg-Pro-Trp) motif, are shown to be essential for its transcriptional repressor activity. Within the bHLH region, HES-1 has a proline residue that exhibits unique binding ability to N box (CACNAG), differing from other bHLH factors that have higher affinity to E box (CANNTG).
Keywords	HES1; hairy and enhancer of split 1, (Drosophila); hairy homolog (Drosophila); HRY; transcription factor HES-1; bHLHb39; FLJ20408; HES 1; Hes1; hairy homolog; hairy-like protein; class B basic helix-loop-helix protein 39; HHL; HRY; HES-1

GENE INFORMATION

Entrez Gene ID	15205
UniProt ID	P35428

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