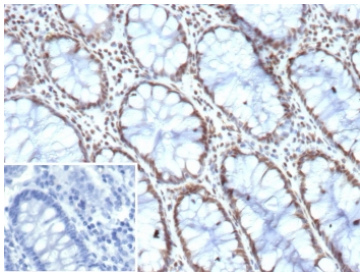
bHLHb38 Antibody HES5/8035 / HES5 Monoclonal Antibody [clone HES5/8035] (V5758)

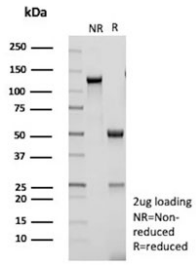
Catalog No.	Formulation	Size
V5758-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5758-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5758SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2, kappa
Clone Name	HES5/8035
Purity	Protein G affinity
UniProt	Q5TA89
Localization	Nuclear
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This bHLHb38 Antibody HES5/8035 / HES5 Monoclonal Antibody is available for research use only.



bHLHb38 Antibody HES5/8035 by IHC in human colon. Immunohistochemistry of FFPE human colon tissue using bHLHb38 Antibody clone HES5/8035. Brown immunoreactivity is prominent in nuclei within the colonic crypt epithelium and surrounding lamina propria, with additional staining along portions of the epithelial cytoplasm. Hematoxylin counterstains nuclei blue. The inset shows the negative control with PBS replacing the primary antibody. Heat-induced epitope retrieval was performed in 10 mM Tris containing 1 mM EDTA, pH 9, for 20 minutes at boiling temperature.



SDS-PAGE analysis of purified, BSA-free HES5 antibody (clone HES5/8035) as confirmation of integrity and purity.

Description

bHLHb38 Antibody HES5/8035 / HES5 Monoclonal Antibody targets hairy and enhancer of split 5 (HES5), a basic helix-loop-helix transcriptional repressor that participates in the regulation of cellular differentiation. HES5 is also designated bHLHb38, reflecting its classification within the basic helix-loop-helix family of transcription factors. The protein functions downstream of canonical Notch signaling and helps coordinate developmental decisions by regulating genes associated with cellular identity and differentiation.

HES5 contains a basic DNA-binding region and a helix-loop-helix domain that facilitates protein dimerization. Its C-terminal WRPW motif supports interactions with transcriptional corepressors, including members of the Groucho/TLE family. Through these molecular interactions, HES5 suppresses selected transcriptional programs and contributes to the maintenance of undifferentiated cellular states. Its activity is influenced by developmental context, Notch receptor activation, and interactions with other transcriptional regulators.

One of the best-characterized functions of HES5 involves the developing nervous system. In neural progenitor populations, Notch signaling promotes HES5 expression, helping prevent premature neuronal differentiation. HES5 represses proneural gene activity and contributes to the balance between progenitor maintenance and neuronal commitment. This regulation is important for controlling the timing of neurogenesis and maintaining an appropriate population of precursor cells during nervous system formation.

HES5 also participates in transcriptional regulatory networks involving other HES family proteins, particularly HES1. Although these proteins share structural and functional characteristics, their expression patterns and regulatory contributions are not identical. Their coordinated activities help establish developmental boundaries and influence the progression of neural progenitors toward differentiated cell types. Investigating individual HES family members can therefore provide insight into the organization of Notch-dependent transcriptional networks.

Outside normal development, altered HES5 expression has been investigated in several cancers and other disease-associated cellular contexts. Its biological effects depend on the surrounding transcriptional environment and may involve changes in differentiation, proliferation, or cellular plasticity. NSJ Bioreagents offers this bHLHb38 Antibody for research examining HES5-associated transcriptional regulation, Notch signaling, and the molecular mechanisms governing developmental cell fate decisions.

For additional antibodies targeting this Notch-regulated transcription factor, see our HES5 Antibody RQ6640.

Application Notes

Optimal dilution of the bHLHb38 Antibody HES5/8035 / HES5 Monoclonal Antibody should be determined by the researcher.

Immunogen

A recombinant partial protein from human HES5 protein was used as the immunogen for the HES5 antibody.

Storage

Aliquot the HES5 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

HES5 antibody, Hairy and Enhancer of Split 5 antibody, bHLH Protein 38 antibody, Transcription Factor HES-5 antibody

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