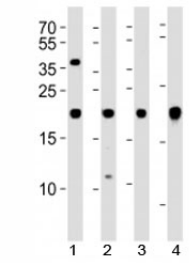
HES5 Polyclonal Antibody / Transcription Factor HES-5 Antibody (F52933)

Catalog No.	Formulation	Size
F52933-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F52933-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

Species Reactivity	Human, Mouse
Predicted Reactivity	Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	Q5TA89
Applications	Western blot: 1:1000
Limitations	This HES5 Polyclonal Antibody / Transcription Factor HES-5 Antibody is available for research use only.



HES5 Polyclonal Antibody by WB in human and mouse samples. Western blot analysis of U-87 MG (lane 1), SK-N-MC (lane 2), human heart (lane 3), and mouse heart (lane 4) lysates using HES5 Polyclonal Antibody F52933 at 1:1000 dilution. The predicted molecular weight of HES5 is approximately 18 kDa.

Description

HES5 Polyclonal Antibody / Transcription Factor HES-5 Antibody targets hairy and enhancer of split 5, a member of the HES family of basic helix-loop-helix transcriptional regulators. HES5 functions predominantly as a transcriptional repressor and is an important downstream mediator of canonical Notch signaling. Its activity contributes to the control of developmental gene expression programs, particularly those governing the balance between progenitor cell maintenance and differentiation. The protein belongs to a conserved family of transcription factors characterized by their involvement in cell fate specification and developmental timing.

HES5 contains a basic region involved in DNA recognition, a helix-loop-helix domain that facilitates dimerization, and a C-terminal WRPW motif associated with transcriptional repression. Through interactions with other regulatory proteins, including Groucho/TLE corepressors, HES5 influences the expression of genes involved in cellular differentiation. Its transcriptional effects are determined by the availability of interacting proteins, the regulatory state of target genes, and the developmental context in which it is expressed.

Canonical Notch signaling provides a major mechanism for regulating HES5 expression. Following ligand-dependent activation of Notch receptors, the released Notch intracellular domain enters the nucleus and participates in transcriptional complexes containing RBPJ. These complexes activate Notch-responsive genes, including HES5. The resulting transcriptional repression helps maintain neural progenitor populations by limiting premature activation of proneural differentiation programs. This mechanism contributes to the orderly production of neurons during embryonic nervous system development.

HES5 also participates in regulatory interactions with other members of the HES family. Its expression overlaps with HES1 in certain neural progenitor populations, although the two proteins have distinct regulatory characteristics and developmental contributions. Studies of HES5 have helped clarify how Notch signaling coordinates progenitor maintenance with the emergence of differentiated neural cell populations. Changes in HES5 expression may alter the timing of neuronal commitment and influence the composition of developing neural tissues.

Beyond neural development, HES5 has been investigated in additional differentiation programs and disease-associated signaling contexts, including cancer. Its biological effects vary with cellular identity and the surrounding transcriptional environment. NSJ Bioreagents offers this HES5 Polyclonal Antibody for research examining Notch-dependent gene regulation, developmental transcriptional networks, and the molecular mechanisms controlling neural progenitor differentiation.

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

Application Notes

Titration of the HES5 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

This HES5 antibody was produced from a rabbit immunized with a KLH conjugated synthetic peptide between 81-115 amino acids from the Central region of human HES5.

Storage

Aliquot the HES5 Polyclonal Antibody / Transcription Factor HES-5 Antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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