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## Product Information

### Monoclonal Anti-Sonic Hedgehog (Shh)

#### Clone SH154

produced in mouse, purified immunoglobulin

Catalog Number **S8321**

#### Product Description

Monoclonal Anti-Sonic Hedgehog (Shh) (mouse IgG1 isotype) is derived from the hybridoma SH154 produced by the fusion of mouse myeloma cells (NS1 cells) and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to amino acids 24-43 of human Shh, conjugated to KLH. The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-Sonic Hedgehog recognizes human, rat, and mouse Shh. The antibody may be used in ELISA, immunoblotting, and immunohistochemistry. The antibody does not cross-react with human or mouse Indian Hedgehog amino-terminal peptide (amino acids 28-202).

Sonic Hedgehog (Shh) is an important cell signaling molecule expressed during embryonic development. Shh is involved in patterning of the developing embryonic systems such as the nervous system, somite, and limb. The N-terminal peptide of Shh is released by autoprolysis and functions through interactions with a multicomponent receptor complex containing the transmembrane proteins Patched and Smoothened. Shh protein is expressed in key embryonic tissues such as the Hensen's node, zone of polarizing activity in the posterior limb bud, notochord, and floor plate of the neural tube. Downstream targets of Shh include the transcription factors Gli3, responsible for Greigs polycephalosyndactyly in humans, and Hoxd13, responsible for polysyndactyly.<sup>1-6</sup>

#### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~2 mg/mL

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

#### Product Profile

Immunoblotting: a working concentration of ~2 µg/mL is recommended using recombinant mouse Shh peptide, amino acids 25-198, Catalog No. S0191.

Immunoblotting Sensitivity: The detection sensitivity of the recombinant mouse Shh peptide is 3-6 ng/lane under reducing conditions.

ELISA: a working concentration of ~2 µg/mL is recommended. The detection sensitivity of recombinant mouse Shh peptide is 12-25 ng/well.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

#### References

1. Perrimon, N., *Cell*, **80**, 517-520 (1995).
2. Weed, M., et al., *Matrix Biol.*, **16**, 53-58 (1997).
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4. Pongracz, J.E., and Stockley, R.A., *Resp. Res.*, **26**, 7-15 (2006).
5. Jiang, R., et al., *Dev. Dyn.*, **235**, 1152-1166 (2006).
6. Sanchez-Camacho, C., et al., *Brain Res. Rev.*, **49**, 242-252 (2004).

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