Mouse Desert Hedgehog/Dhh N-Terminus Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF733

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Desert Hedgehog/Dhh N-Terminus in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 20% cross-reactivity with recombinant mouse (rm) Shh N-terminal peptide (aa 25-198) is observed. Additionally, in direct ELISAs, no cross-reactivity with rmDhh C-terminal peptide (aa 199-396) and rmIhh C-terminal peptide (aa 241-449) is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant mouse Desert Hedgehog/Dhh aa 23-198 Accession # Q61488
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

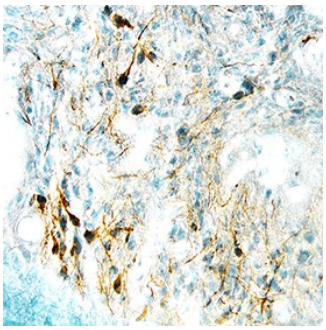
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse Desert Hedgehog (C23II), N-Terminus (Catalog # 733-DH)
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



Desert Hedgehog/Dhh in Mouse Brain. Desert Hedgehog/Dhh was detected in perfusion fixed frozen sections of mouse brain using Goat Anti-Mouse Desert Hedgehog/Dhh N-Terminus Antigen Affinity-purified Polyclonal Antibody (Catalog # AF733) at 5 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal cell bodies and processes. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

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BACKGROUND

Desert Hedgehog (Dhh) belongs to the highly conserved Hedgehog family of proteins which are involved in multiple developmental processes. Hedgehogs are synthesized as 45 kDa precursors that are cleaved autocatalytically. The 19 kDa N-terminal fragment remains membrane associated due to its cholesterol and palmitate modifications. Binding of this fragment to Patched receptors results in the loss of Patched repression of Smoothened signaling (1-4). Dhh binds both Patched and Patched 2 as well as Hedgehog interacting protein (Hip) (5). Within the N-terminal peptide, mouse Dhh shares 97% and 100% amino acid (aa) sequence identity with human and rat Dhh, respectively. It shares 74% aa seqeuence identity with mouse Indian (Ihh) and Sonic hedgehog (Shh) (6, 7). Dhh is produced by Sertoli cells and is required for testis development and spermatogenesis (8, 9). It induces steroidogenic factor 1 which is instrumental in promoting Leydig cell differentiation (10, 11). It also promotes the deposition of basal lamina surrounding seminiferous tubules (8). In humans, mutations of Dhh are associated with pure gonadal dysgenesis (12). Dhh is expressed in the female by ovarian granulosa cells and the corpus luteum (13). Its up-regulation in human ovarian cancer correlates positively with proliferative index and negatively with prognosis (14). Dhh is also expressed by Schwann cells and is up-regulated following nerve injury (15, 16). It induces the expression of Patched and Hip in nerve fibroblasts and promotes the formation of the connective tissue sheath surrounding peripheral nerves (15).

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