

Product datasheet for **TA323716**

Sonic Hedgehog (SHH) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC
Recommended Dilution:	IHC: 50-100 Positive control: Human breast cancer Predicted cell location: Cytoplasm, ExtraCellular space
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Synthetic peptide corresponding to a region derived from 448-462 amino acids of Human sonic hedgehog
Formulation:	PBS pH7.3, 0.05% NaN ₃ , 50% glycerol
Concentration:	lot specific
Purification:	Antigen affinity purification
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	sonic hedgehog
Database Link:	NP_000184 Entrez Gene 20423 Mouse Entrez Gene 29499 Rat Entrez Gene 6469 Human Q15465



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Background:

This gene encodes a protein that is instrumental in patterning the early embryo. It has been implicated as the key inductive signal in patterning of the ventral neural tube; the anterior-posterior limb axis; and the ventral somites. Of three human proteins showing sequence and functional similarity to the sonic hedgehog protein of *Drosophila*; this protein is the most similar. The protein is made as a precursor that is autocatalytically cleaved; the N-terminal portion is soluble and contains the signalling activity while the C-terminal portion is involved in precursor processing. More importantly; the C-terminal product covalently attaches a cholesterol moiety to the N-terminal product; restricting the N-terminal product to the cell surface and preventing it from freely diffusing throughout the developing embryo. Defects in this protein or in its signalling pathway are a cause of holoprosencephaly (HPE); a disorder in which the developing forebrain fails to correctly separate into right and left hemispheres. HPE is manifested by facial deformities. It is also thought that mutations in this gene or in its signalling pathway may be responsible for VACTERL syndrome; which is characterized by vertebral defects; anal atresia; tracheoesophageal fistula with esophageal atresia; radial and renal dysplasia; cardiac anomalies; and limb abnormalities. Additionally; mutations in a long range enhancer located approximately 1 megabase upstream of this gene disrupt limb patterning and can result in preaxial polydactyly.

Synonyms:

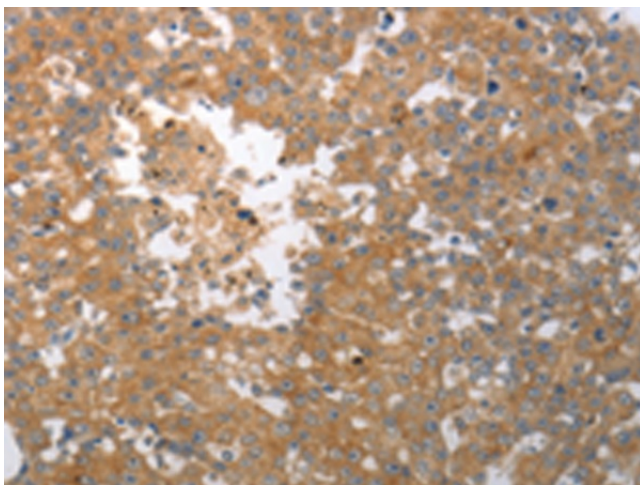
HHG1; HLP3; HPE3; MCOPCB5; SMMCI; TPT; TPTPS

Protein Families:

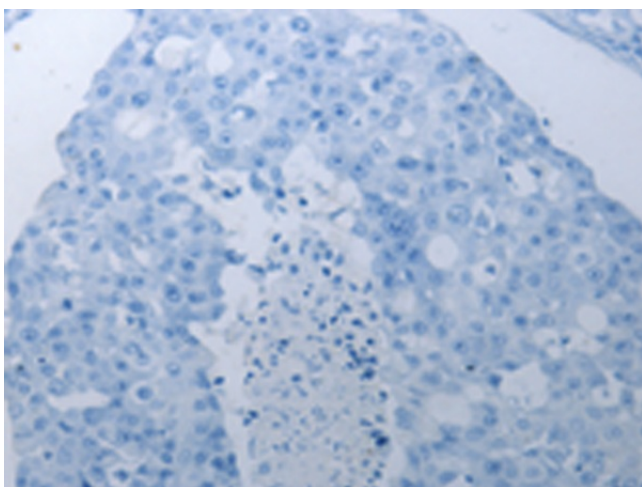
Druggable Genome, ES Cell Differentiation/IPS, Secreted Protein, Transmembrane

Protein Pathways:

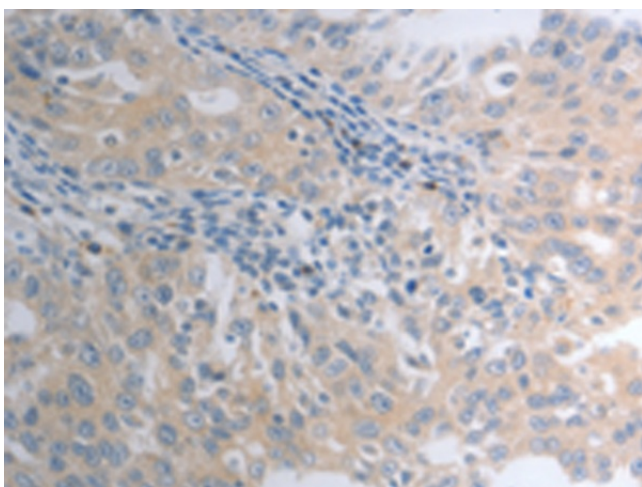
Basal cell carcinoma, Hedgehog signaling pathway, Pathways in cancer

Product images:


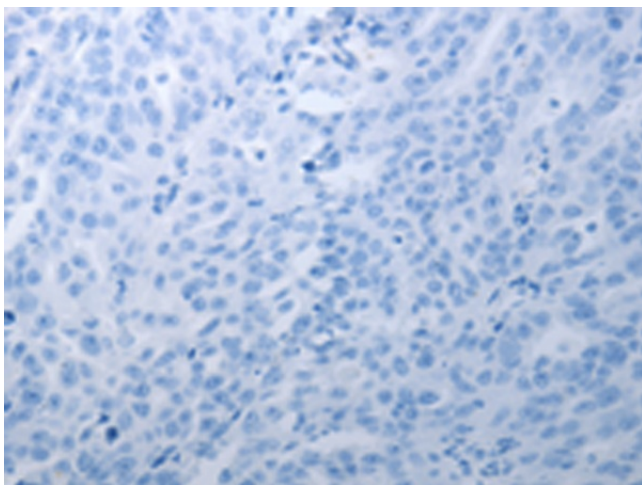
Immunohistochemistry of paraffin-embedded Human breast cancer tissue using TA323716 (SHH Antibody) at dilution 1/40 (Original magnification: ×200)



Immunohistochemistry of paraffin-embedded Human breast cancer tissue using TA323716 (SHH Antibody) at dilution 1/40, treated with synthetic peptide. (Original magnification: ×200)



Immunohistochemistry of paraffin-embedded Human ovarian cancer tissue using TA323716 (SHH Antibody) at dilution 1/40 (Original magnification: ×200)



Immunohistochemistry of paraffin-embedded Human ovarian cancer tissue using TA323716 (SHH Antibody) at dilution 1/40, treated with synthetic peptide. (Original magnification: ×200)