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HAS2 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1765a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	Q92819
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4E7
Isotype	IgG1
Calculated MW	63566
Description	Hyaluronan or hyaluronic acid (HA) is a high molecular weight unbranched polysaccharide synthesized by a wide variety of organisms from bacteria to mammals, and is a constituent of the extracellular matrix. It consists of alternating glucuronic acid and N-acetylglucosamine residues that are linked by beta-1-3 and beta-1-4 glycosidic bonds. HA is synthesized by membrane-bound synthase at the inner surface of the plasma membrane, and the chains are extruded through pore-like structures into the extracellular space. It serves a variety of functions, including space filling, lubrication of joints, and provision of a matrix through which cells can migrate. HA is actively produced during wound healing and tissue repair to provide a framework for ingrowth of blood vessels and fibroblasts. Changes in the serum concentration of HA are associated with inflammatory and degenerative arthropathies such as rheumatoid arthritis. In addition, the interaction of HA with the leukocyte receptor CD44 is important in tissue-specific homing by leukocytes, and overexpression of HA receptors has been correlated with tumor metastasis. HAS2 is a member of the newly identified vertebrate gene family encoding putative hyaluronan synthases, and its amino acid sequence shows significant homology to glycosaminoglycan synthetase (DG42) from Xenopus laevis, and human and murine hyaluronan synthase 1.
Immunogen	Purified recombinant fragment of human HAS2 (AA: 67-170) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	3037
Other Names	Hyaluronan synthase 2, 2.4.1.212, Hyaluronate synthase 2, Hyaluronic acid synthase 2, HA synthase 2, HAS2
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 ICC~~N/A E~~1/10000

Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	HAS2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HAS2 (HGNC:4819)
Function	Catalyzes the addition of GlcNAc or GlcUA monosaccharides to the nascent hyaluronan polymer (Probable) (PubMed:20507985, PubMed:21228273, PubMed:23303191, PubMed:32993960). Therefore, it is essential to hyaluronan synthesis a major component of most extracellular matrices that has a structural role in tissues architectures and regulates cell adhesion, migration and differentiation (PubMed:20507985, PubMed:21228273, PubMed:8798477). This is one of three isoenzymes responsible for cellular hyaluronan synthesis and it is particularly responsible for the synthesis of high molecular mass hyaluronan (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein Endoplasmic reticulum membrane; Multi- pass membrane protein. Vesicle. Golgi apparatus membrane; Multi-pass membrane protein. Lysosome Note=Travels from endoplasmic reticulum (ER), Golgi to plasma membrane and either back to endosomes and lysosomes, or out into extracellular vesicles (PubMed:30394292). Post-translational modifications control HAS2 trafficking (PubMed:30394292).
Tissue Location	Expressed in fibroblasts.

References

1.Cancer Res. 2012 Jan 15;72(2):537-47.2.J Biol Chem. 2011 Sep 23;286(38):33632-40.

Images

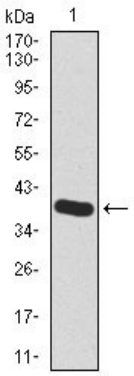
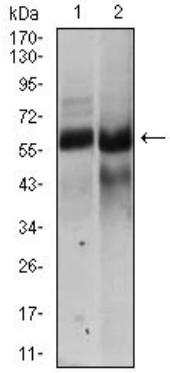


Figure 1: Western blot analysis using HAS2 mAb against human HAS2 recombinant protein. (Expected MW is 37.5 kDa)

Figure 2: Western blot analysis using HAS2 mouse mAb against NTERA-2 (1), HEK293 (2) cell lysate.



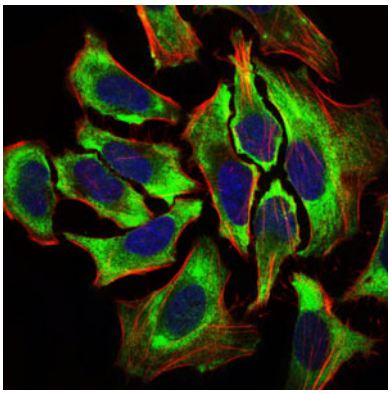


Figure 3: Immunofluorescence analysis of HeLa cells using HAS2 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

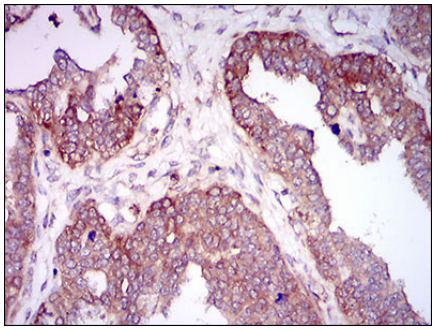


Figure 4: Immunohistochemical analysis of paraffin-embedded ovarian cancer tissues using HAS2 mouse mAb with DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.