Datasheet for ABIN967680

anti-FOXA2 antibody

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Overview

Quantity:	0.1 mg
Target:	FOXA2
Reactivity:	Human, Mouse
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This FOXA2 antibody is un-conjugated
Application:	Western Blotting (WB), BioImaging (BI), Intracellular Staining (ICS)

Product Details

Brand:	BD Pharmingen™
Immunogen:	Human FoxA2 Peptide
Clone:	N17-280
Isotype:	IgG1 kappa
Cross-Reactivity (Details):	Predicted: Mouse
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Sodium azide is a reversible inhibitor of oxidative metabolism, therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody

Product Details

	format, if available, for in vitro and in vivo use. 4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 5. Triton is a trademark of the Dow Chemical Company.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	FOXA2
Alternative Name:	FOXA2 (FOXA2 Products)
Background:	FoxA2, forkhead box A2, is a member of the forkhead class of DNA-binding proteins that regulates gene expression in the liver, pancreatic islets, adipocytes and some neural cells. This hepatocyte nuclear factor is a transcriptional activator for liver-specific genes such as alpha fetoprotein, albumin, tyrosine aminotransferase and transthyretin. FoxA2 is expressed in embryonic endoderm, the germ layer that gives rise to the digestive system, and contributes to the specification of the pancreas and the regulation of glucose homoeostasis. FoxA2 also has roles in neural development. Specifically, FoxA2 cooperates with related FoxA1 in the specification and differentiation of midbrain dopaminergic neurons in a dosage-dependent manner. Synonyms: Forkhead box A2, HNF3B, HNF-3B, HNF-3beta, hepatocyte nuclear factor 3beta
Molecular Weight:	48 kDa
Pathways:	Dopaminergic Neurogenesis, Regulation of Carbohydrate Metabolic Process

Application Details

Comment:	Related Products: ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	0.5 mg/mL
Buffer:	Aqueous buffered solution containing ≤0.09 % sodium azide.

Handling

Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Store undiluted at 4°C.

Publications

Product cited in:

Burtscher, Lickert: "Foxa2 regulates polarity and epithelialization in the endoderm germ layer of the mouse embryo." in: **Development (Cambridge, England)**, Vol. 136, Issue 6, pp. 1029-38, (2009) (PubMed).

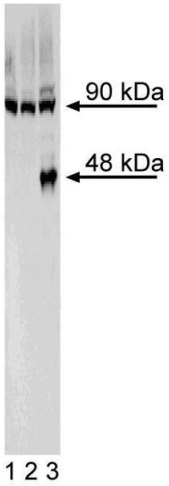
Lin, Metzakopian, Mavromatakis, Gao, Balaskas, Sasaki, Briscoe, Whitsett, Goulding, Kaestner, Ang: "Foxa1 and Foxa2 function both upstream of and cooperatively with Lmx1a and Lmx1b in a feedforward loop promoting mesodiencephalic dopaminergic neuron development." in: **Developmental biology**, Vol. 333, Issue 2, pp. 386-96, (2009) (PubMed).

DAmour, Agulnick, Eliazer, Kelly, Kroon, Baetge: "Efficient differentiation of human embryonic stem cells to definitive endoderm." in: **Nature biotechnology**, Vol. 23, Issue 12, pp. 1534-41, (2005) (PubMed).

Thomson, Itskovitz-Eldor, Shapiro, Waknitz, Swiergiel, Marshall, Jones: "Embryonic stem cell lines derived from human blastocysts." in: **Science (New York, N.Y.)**, Vol. 282, Issue 5391, pp. 1145-7, (1998) (PubMed).

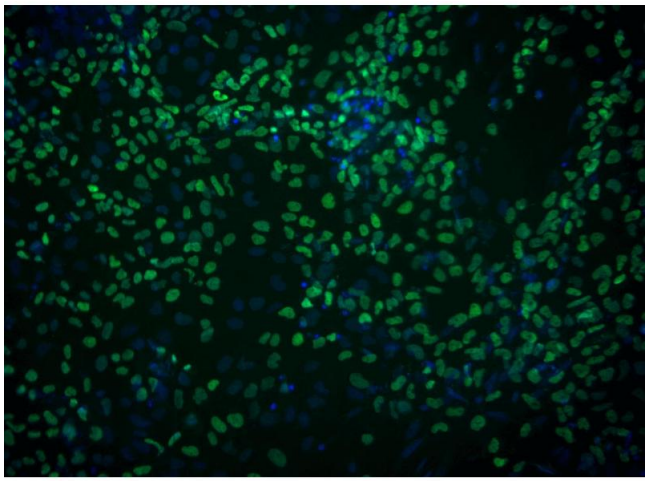
Monaghan, Kaestner, Grau, Schütz: "Postimplantation expression patterns indicate a role for the mouse forkhead/HNF-3 alpha, beta and gamma genes in determination of the definitive endoderm, chordamesoderm and neuroectoderm." in: **Development (Cambridge, England)**, Vol. 119, Issue 3, pp. 567-78, (1994) (PubMed).

There are more publications referencing this product on: Product page



Western Blotting

Image 1. Western blot analysis of FoxA2 in definitive endoderm derived from human embryonic stem (ES) cells. H9 human ES cells (WiCell, Madison, WI) were differentiated to definitive endoderm for 3 days (D'Amour et al, 2005) in RPMI medium supplemented with 0.5% FBS, 1X L-glutamine, and 100 ng/ml Activin A (R&D Systems). Lysates from control ES cells (lane 1) and from day 1 (lane 2) and day 3 (lane 3) differentiated cells were probed with Purified Mouse anti-Human FoxA2 antibody at 1.0 µg/ml. The presence of FoxA2 is demonstrated by the 48-kDa band in human ES-derived definitive endodermal cells (Lane 3), which is absent in H9 human ES cells (Lane 1) and at day 1 of differentiation (Lane 2). Purified Mouse anti-Hsp90 monoclonal antibody (ABIN967957) was used as a gel-loading control (MW 90 kDa).



Immunofluorescence

Image 2. Immunofluorescent staining of FoxA2 in definitive endoderm derived from human embryonic stem (ES) cells. H9 human ES cells (WiCell, Madison, WI) passage 35 grown on an irradiated mouse embryonic feeder layer were differentiated to definitive endoderm for 3 days (D'Amour et al, 2005) in RPMI medium supplemented with 0.5% FBS,1x L-glutamine, and 100 ng/ml Activin A (R&D Systems). The cells were fixed with BD Cytofix buffer, permeabilized with 0.1% Triton™ X-100, and stained with Purified Mouse anti-Human FoxA2 monoclonal antibody (pseudo-colored green) at 5 µg/mL. The second-step reagent was Alexa Fluor® 488 goat anti-mouse Ig (Life Technologies), and counter staining was with Hoechst 33342 (pseudo-colored blue). The image was captured on a BD Pathway™ 435 Cell Analyzer and merged using BD Attovision™ Software.