

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Osterix/Sp7 in direct ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 764704
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Osterix/Sp7 Met19-Leu288 Accession # Q8TDD2
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Osterix, also known as Sp7, is an approximately 45 kDa transcription factor that is required for osteogenesis and bone homeostasis. Osterix cooperates with BMP-6 in the differentiation of osteoblasts from mesenchymal stem cells by regulating the transcription of several genes involved in osteoblast differentiation and function (i.e. SATB2, Collagen V, and SOST). The transcription of Osterix is induced by BMP-2, IGF-I, and parathyroid hormone, while its activity is regulated by Akt and p38 MAPK-mediated phosphorylation. Osterix contains a transactivation domain (aa 141-210) and three zinc finger domains (aa 294-318, aa 324-348, and aa 354-376). Alternative splicing generates a short isoform that lacks the N-terminal 18 amino acids. Within aa 19-288, human Osterix shares 94% aa sequence identity with mouse and rat Osterix.

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