

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Osteoadherin/OSAD in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 25% cross-reactivity with recombinant human OSAD is observed.
Source	Monoclonal Rat IgG ₁ Clone # 348423
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Osteoadherin/OSAD Gln21-Ile423 Accession # O35103
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 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.

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

Osteoadherin (OSAD), also known as Osteomodulin, is an extracellular matrix keratan sulfate proteoglycan that belongs to the class II subfamily of small leucine-rich proteoglycans (SLRP). LRR motifs consist of approximately 20-30 amino acids (aa) with conserved leucine spacing, folded into a structure with one β-sheet and one α-helix (1, 2). The mouse OSAD cDNA encodes a 423 aa precursor that contains a 20 aa signal sequence and twelve tandem leucine rich repeats (3). Mouse OSAD shares 75%, 79%, and 91% aa sequence identity with bovine, human, and rat OSAD, respectively. Mouse OSAD shares 32-35% aa sequence identity with mouse class II SLRPs Fibromodulin, Keratocan, Lumican, and PRELP. Bovine, mouse, and rat OSAD are expressed as 60-85 kDa molecules, even though the amino acid sequence for each predicts a size of 46-47 kDa. The primary difference is due to the presence of extensive N-linked glycosylation that can vary between tissues of the same species (4, 5). Human OSAD is expressed as an even larger 110 kDa molecule in teeth (6). OSAD contains eight sulfated tyrosine residues (4, 7) and is distinguished from other class II SLRPs by the presence of an approximately 70 aa C-terminal acidic domain (3). OSAD is expressed by fetal and adult osteoblasts but is not detectable in cartilage or tendon (3, 4, 8). In dental tissue, OSAD is expressed by odontoblasts and ameloblasts (5, 9-11) and is involved in the mineralization of bone and teeth (5, 11,12). OSAD promotes the adhesion of osteoblasts and odontoblasts to the surrounding matrix, an interaction that is mediated by Integrin α_vβ₃ (4, 6).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.