

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Brevican in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 450616
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Brevican isoform 1
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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.

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

Brevican, also called BEHAB, is a secreted member of the the lectican family of proteoglycans that share a common domain structure (1). Brevican contains an Ig-like V-set domain, two link domains, a Glu-rich region, a central region with glycosaminoglycan (GAG) modifications, an EGF-like domain, a C-type lectin domain, and a C-terminal Sushi/CRP-like domain (2). Brevican is restricted to the CNS and is expressed by astrocytes, oligodendrocytes, and neurons (3-7). A GPI-anchored alternate splice form exists that is truncated following the central (GAG) region (2, 8). Brevican is cleaved by multiple proteases and exists in a number of distinct fragments (5, 9, 10). Full-length brevican consists of a 97 kDa core protein with up to approximately 100 kDa of attached chondroitin sulfate but not heparan sulfate chains (4, 7, 11, 12). Brevican associates with the extracellular matrix, perineuronal nets, and astrocyte cell surfaces by means of its chondroitin sulfate, GPI anchor, hyaluronic acid-binding link domains, and the core protein (4, 7, 8, 13). The secreted isoform is dominant during brain development and is upregulated in astrocytes following brain injury (2, 14). In human and rat, an under-glycosylated form of brevican is upregulated in highly aggressive glioma but not in low-grade glioma or other brain pathologies (15, 16). In mouse and rat, levels of an ADAMTS4-generated 55 kDa N-terminal fragment increase during remodeling after excitotoxic injury (11, 12). Human brevican shares 90%, 80%, and 80% aa sequence identity with bovine, mouse, and rat brevican, respectively. Within the Ig-like and two link domains, brevican shares 45%-51% aa sequence identity with aggrecan, neurocan, and versican.

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