

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ITM2B in direct ELISAs. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) ITM2A and rhITM2C is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human ITM2B Ala60-Ser266 Accession # Q9Y287
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 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.

Immunohistochemistry 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

ITM2B (Integral membrane protein 2B; also protein E25B and BRI/BRI2) is a 50 kDa member of the ITM2 family of proteins. It is widely expressed, and is involved in APP processing. ITM2B is expressed in the Golgi and on the cell surface, and forms a noncovalent complex with AβPP. Although both molecules are susceptible to secretase processing, ITM2B appears to block AβPP cleavage by α- and γ-secretase. Human ITM2B is a 266 amino acid (aa) type II transmembrane protein. The ECD (aa 76-266) contains a propeptide sequence (aa 244-266), one BRICHOS domain (aa 137-231), and a Cys at position 89 that participates in homodimerization. Multiple enzymes can cleave ITM2B. Cleavage of the propeptide by furin generates a 3-4 kDa soluble fragment and a 41-45 kDa transmembrane molecule. Further cleavage of the 44 kDa form in the juxtamembrane and intramembrane regions generates a soluble 24 kDa BRICHOS-containing protein, a 22 kDa N-terminal transmembrane peptide, and a soluble 10 kDa cytoplasmic fragment. There are multiple potential splice variants. Two add different 11 aa sequences to the propeptide, resulting in two different 4-5 kDa, 34 aa fragments being released by furin activity. There is also a deletion of aa 83-188, and a substitution of 21 aa for aa 116-266. Over aa 60-266, human ITM2B shares 96% aa identity with mouse ITM2B.

PRODUCT SPECIFIC NOTICES

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