

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Contactin-5 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant human (rh) Contactin-2 and rhContactin-3 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Contactin-5 Glu19-Gln1059 Accession # O94779
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

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.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human Contactin-5 (Catalog # 3030-CN)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Contactin-5 (CNTN5), also known as NB-2, is a neural adhesion molecule in the contactin family of the immunoglobulin superfamily. The contactin family comprises six members (CNTN1/F3, CNTN2/TAG-1, CNTN3/BIG-1, CNTN4/BIG-2, CNTN5/NB-2 and CNTN6/NB-3) that are characterized by the presence of six Ig-like domains, four fibronectin type III-like repeats, and a glycosylphosphatidylinositol (GPI)-anchoring domain (1, 2). The human Contactin-5 cDNA exists in two splice forms which contain an 18 amino acid (aa) signal sequence and a 28 aa C-terminal propeptide. The long isoform is a 1082 aa protein that shares 91% aa sequence identity with rat and mouse Contactin-5. The short isoform lacks the first 74 aa at the N-terminus of the long isoform. Human Contactin-5 shares 43%, 41%, 52%, 52%, and 48% aa identity with Contactins-1, -2, -3, -4, and -6, respectively (3). Contactin family proteins exist as membrane-bound proteins, but can also be released as soluble proteins by GPI-specific phospholipase D. The gene encoding Contactin-5 is localized to a chromosomal region associated with schizophrenia and the neuronal disorder Jacobsen syndrome (4). The highest expression of human Contactin-5 is seen in occipital lobe and amygdala, followed by cerebral cortex, frontal lobe, thalamus, and temporal lobe (4). In rat, Contactin-5 is highly expressed specifically in structures of the central auditory pathway (5). Also in rat, Contactin-5 has been shown to promote neurite outgrowth of cerebral cortical neurons *in vitro* (5). Deficient Contactin-5 expression in mice results in impaired neuronal activity of the central auditory system (6).

References:

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2. Denisenko-Nehrbass, N. *et al.* (2002) *J. Physiol. Paris* **96**:99.
3. Ogawa, J. *et al.* (1996) *Neurosci. Lett.* **218**:173.
4. Kamei, Y. *et al.* (2000) *Genomics* **69**:113.
5. Ogawa, J. *et al.* (2001) *J. Neurosci. Res.* **65**:100.
6. Li, H. *et al.* (2003) *Eur. J. Neurosci.* **17**:929.