

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human GABA _A R β3 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant rat GABA _B R2 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human GABA _A R β3 Gln26-Tyr245 Accession # P28472
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.

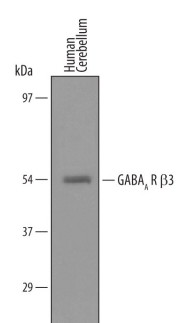
APPLICATIONS

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	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Simple Western	10 µg/mL	See Below

DATA

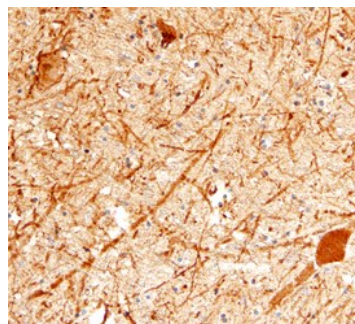
Western Blot



Detection of Human GABA_A R β3 by Western Blot.

Western blot shows lysates of human brain (cerebellum) tissue. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human GABA_A R β3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5590) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for GABA_A R β3 at approximately 54 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

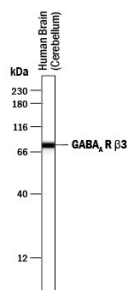
Immunohistochemistry



GABA_A R β3 in Human Brain.

GABA_A R β3 was detected in immersion fixed paraffin-embedded sections of human brain using Sheep Anti-Human GABA_A R β3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5590) at 5 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to neurons. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Simple Western



Detection of Human GABA_A R β3 by Simple Western™.

Simple Western™. Simple Western lane view shows lysates of human brain cerebellum tissue, loaded at 0.2 mg/mL. A specific band was detected for GABA_A R β3 at approximately 78 kDa (as indicated) using 10 µg/mL of Sheep Anti-Human GABA_A R β3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5590) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



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	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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

GABA_A R β3 (GABA-A receptor subunit beta 3; also GABR3) is a 53-58 kDa member of the ligand-gated ion channel family of proteins. It is generally one of three beta-type subunits that contribute to a GABA-binding pentameric, postsynaptic chloride ion channel on neurons. Alternatively, it can apparently form a homopentameric channel that does not respond to GABA. Mature human GABA_A R β3 is 448 amino acids (aa) in length. It is a 4-transmembrane glycoprotein that contains an extended N-terminal extracellular region (aa 26-245) and a long cytoplasmic loop between aa 328-450. There are potential splice variants. One shows an alternate start site at Met65, while others contain either a 48 aa substitution for aa 1-228, a nine aa substitution for aa 1-80, or a 26 aa substitution for aa 1-26. Over aa 26-245, human and mouse GABA_A R β3 are absolutely identical in aa sequence.