

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LRRK2 in direct ELISAs.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human LRRK2 Val241-Val500 Accession # Q5S007
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

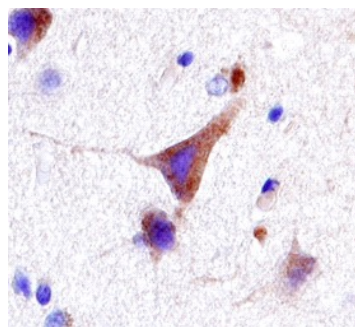
APPLICATIONS

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
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



LRRK2 in Human Brain. LRRK2 was detected in immersion fixed paraffin-embedded sections of human brain (cortex) using Human LRRK2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6674) at 5 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm and processes of neuronal cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
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

LRRK2 (Leu-rich repeat/LRR-containing protein kinase 2; also Dardarin) is a 260-280 kDa member of the TKL (Tyr kinase-like) Ser/Thr protein kinase family of molecules. It is unusual in that it possesses both GTPase and protein kinase enzyme activity. LRRK2 is expressed in dopamine system neurons, macrophages and B2 B cells (in rodent), and mutations of the molecule are associated with the pathogenesis of Parkinson's disease. Through its protein kinase activity, LRRK2 phosphorylates both 4E-BP and FoxO1, two molecules involved in the initiation of protein translation. Human LRRK2 is 2527 amino acids (aa) in length. It contains multiple domains, including 16 LRRs (aa 226-249; 791-1291; 1556-1887), one coiled-coil region (aa 319-348), a GTPase Roc domain (aa 1328-1511), a protein kinase region (aa 1879-2138), and a WD40 domain (aa 2168-2387). There are three potential splice variants for LRRK2. One shows an alternative start site at Met1203 coupled to a 26 aa substitution for aa 2465-2527, a second contains a three aa substitution for aa 1-1165, and a third possesses an alternative start site at Met402 accompanied by a 12 aa substitution for aa 1259-2527. Over aa 241-500, human LRRK2 shares 85% aa identity with mouse LRRK2.