

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human FRAT2 in direct ELISAs.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human FRAT2 Ser31-Leu233 (Ala83Thr) Accession # O75474
<b>Formulation</b>	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.

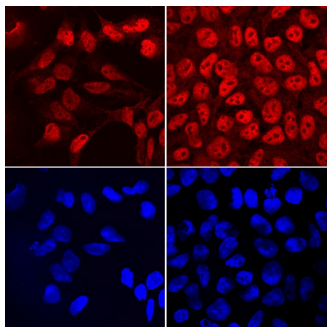
#### APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below

#### DATA

**Immunocytochemistry**



**FRAT2 in Ntera-2 Human Cell Line.**  
FRAT2 was detected in immersion fixed Ntera-2 human testicular embryonic carcinoma cell line cultured with (left panels) and without (right panels) 10µM retinoic acid for 4 days using Sheep Anti-Human FRAT2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7980) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red, upper panels; Catalog # NL010) and counterstained with DAPI (blue, lower panels). Specific staining was localized to nuclei. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### BACKGROUND

FRAT2 (Frequently Rearranged in Advanced T-cell lymphomas-2; also GSK-3-binding protein FRAT2) is an intracellular member of the GSK-3-binding protein family. Although its predicted MW is 28 kDa, due to its highly acidic nature, it runs anomalously at 35 kDa in SDS-PAGE. It is widely expressed, and plays a key role in the regulation of the Wnt signaling pathway. Typically, in the absence of stimulation, GSK-3β and β-catenin associate with Axin, where GSK-3β phosphorylates β-catenin, leading to its turnover. Upon Wnt stimulation, GSK-3β phosphorylation of β-catenin is decoupled, resulting in β-catenin mediated gene activation. FRAT2 has the same effect as Wnt stimulation on GSK-3β activity, serving as a non-Wnt activator of β-catenin. It does so by promoting the dissociation of GSK-3β from axin. It also interacts with Diversin, a participant in JNK signaling. This suggests that FRAT2 plays a role in both Wnt/β-catenin and PCP signaling pathways. Human FRAT2 is 233 amino acids (aa) in length. It contains an N-terminal acidic domain (aa 1-54), a Pro-rich segment (aa 60-107) and a GSK-3β binding region (aa 171-196). Over aa 31-233, human FRAT2 shares 73% aa sequence identity with both mouse FRAT2 and human FRAT1.