CELL APPLICATIONS, INC.

Phospho-BTK (Tyr551) Antibody

Cat. No. CG1053

Applications:	**WB, IHC, ELISA**
Detected MW:	**76 kDa**
Species & Reactivity:	**Human, Mouse, Rat**
Isotype:	**Rabbit IgG**

BACKGROUND

Bruton's Tyrosine Kinase (BTK) is member of the Tec family that is critically important for the growth, differentiation and activation of myeloid-, mast- and B-cells.[1] BTK is activated firstly by membrane localization stimulated by PIP3 generation, and subsequently, by transphosphorylation of Tyr-551 by Src family kinases. Further activation occurs within the SH3 domain via a transphosphorylation mechanism. Tyr223 in this domain was phosphorylated by c-Abl.[2] Activated BTK is involved in the phosphorylation of a number of signaling molecules involved in the PLCgamma, JNK and p38 MAPK pathways, leading to Ca^{2+} mobilization, mRNA stabilization and the induction of NF-kappaB and AP-1 transcription factors.[3] BTK activity is negatively regulated by a number of proteins including inhibitor of BTK (IBTK), Sab and c-Cbl. Mutations in this enzyme are known in humans and result in the immunological disorder X-linked agammaglobulemia.[4]

References:

1. Mohamed, A.J. et al: Immunol. Rev. 228:58-73, 2009
2. Backesjo, C.M. et al: Biochem. Biophy. Res. Commun. 299:510-5, 2002
3. Kurosaki, T & Hikida, M.: Immunol. Rev. 228:132-48, 2009
4. Toth, B. et al: Mol. Immunol. 46:2140-6, 2009

TECHNICAL INFORMATION

Source:
Phospho-BTK (Tyr551) Antibody is a rabbit antibody raised against a short peptide from human BTK sequence surrounding and containing phosphor-Tyr551.

Specificity and Sensitivity:
This antibody detects endogenous phosphorylated BTK (Tyr551) proteins in normal cell lysates without cross-reactivity with other family members.

Storage Buffer: Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.

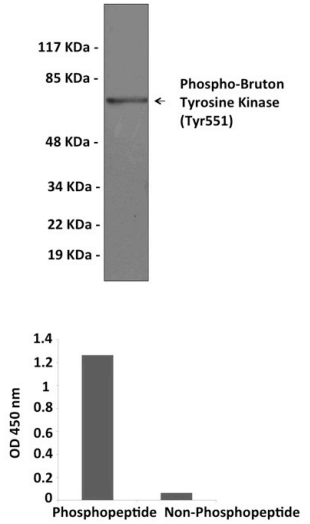
Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:500-1:1000
IP	n/d
IHC	1:100
ICC	n/d
FACS	n/d
ELISA	1:40,000

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA



Top: Western blot analysis of extracts from HeLa cells treated with 100 µM H2O2 for 30 minutes.
Bottom: ELISA for Immunogen Phosphopeptide (left) and Non-Phosphopeptide (right).